Virginia - Coastal Zone Management Program

KING AND QUEEN COUNTY
COMPREHENSIVE PLAN
1990

Adopted by:

THE BOARD OF SUPERVISORS

Prepared by:

THE PLANNING COMMISSION
The County of King and Queen, Virginin

and

THE COX COMPANY
Planners • Engineers • Landscape Architects
Charlottesville, Virginia

Adopted:
February, 1990

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INTRODUCTION

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The preparation of the County's second Comprehensive Plan represents a considerable challenge. As a place of unique agricultural and environmental significance, King and Queen County deserves special care in planning for a future which will preserve and enhance the qualities which have earned this significance. As with the 1979 Comprehensive Plan and subsequently adopted land development ordinances, the future success of growth management will not end with the adoption of this Plan, but will be predicated on how County leaders endeavor to meet the challenge of future land development pressures.

Known as the "shoestring county", King and Queen was formed from New Kent County in 1691, being named for William III and Mary of the English throne. The County is approximately forty five miles in length and averages a little over eight miles in width. Its present agrarian base evolved over the centuries, and today remains the focal point of the local economy.

Due to the timing of the Plan Update, The Chesapeake Bay Preservation Act guidelines are only briefly mentioned. As the County and Planning District Commission develop and finalize Chesapeake Bay Preservation Programs they should be completely integrated into the Comprehensive Plan. We have, however, emphasized a sensitivity to King and Queen's natural environment. Great care has been taken to identify sensitive environmental areas, prime agricultural areas and other portions of the County which should be conserved for future generations. In the near future the County's zoning and subdivision ordinance will need to be revised in order to effect the Bay regulations and criteria. This should result in development regulations that more closely reflect the goals and policies of this Plan.

This Comprehensive Plan has recognized that King and Queen is unique among Tidewater Virginia communities. Its strong agrarian and forestry economic base, for the most part, has escaped the ravages of uncontrolled suburbanization which has so adversely impacted the County's neighbors. Anticipating the growth demands of the 1990's, steps have been taken in this Plan and must be taken in future plans to provide for orderly growth with sensitivity to both the natural ecology and agrarian environments. In doing so, however, the County fathers should never lose sight of King and Queen's place in history and should always take appropriate steps to ensure that the County does not lose its special character.

Chapter 1
GOALS AND OBJECTIVES

INTRODUCTION

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GOALS AND OBJECTIVES

Goals-Directed Planning Approach

The King and Queen County Comprehensive Plan is designed to be a guide for the physical development of King and Queen County during the next 10 to 20 years. The overriding purpose of the plan is to encourage the development of a safe, healthy, and distinctive living environment while maintaining the unique and fragile natural environment of the County. While preservation, conservation, economic development and housing issues are likely to be the dominate underlying themes to be presented by local citizens, many other land use considerations must be addressed. For example, the timing of development and the appropriateness of local ordinances and land use designations are integral to the success of the growth management process. Many factors will affect King and Queen County, and this plan specifically focuses on those areas in which the County can have a positive impact.

An intelligent and comprehensible plan cannot be structured without taking into account the locality's vision for its future. Therefore a future land use plan should be integrally tied to preceding goals, objectives and planning policies. The initial step in the subject planning process is to identify and clearly define future goals, to translate those goals into objectives by which they would be realized, and to establish policies and strategies by which the goals can be implemented for the betterment of the community of interest. To formulate a set of goals and objectives for King and Queen County, three major and distinct efforts should be undertaken in order to ensure that the planning process proceeds in a rational manner and that adopted future land use recommendations will be constructed on firm social, economic, moral and legal underpinnings.

The initial effort in this regard is to undertake a thorough review and analysis of all previous County plans and growth management documents. In doing so, past planning goals are updated, refined and merged into the context of King and Queen County study requirements. Secondly, the King and Queen County planning process should be designed to incorporate a range of citizen input and participation opportunities which enabled all interested parties to express their ideas, visions and expectations for the future of the County. Thirdly, the Planning Commission must maintain a constant goals-oriented "vigil" during the development of the master planning recommendations for King and Queen County. In doing so, they will be able to maintain a high level of leadership and an objective focus as the many "nuts and bolts" aspects of the Comprehensive Plan are being developed and as numerous land use alternatives are evaluated. In particular instances the Commission may need to draw upon this set of goals and objectives and apply rational and consistent planning criteria in testing land use alternatives and/or implementation concepts. The result of this thorough, goals-directed planning effort will yield a more consistent land use planning program and a more efficient framework for the growth management program of King and Queen County.

Recommended Goals and Objectives

For the purpose of organizing this comprehensive planning effort, the County's range of goal setting influence can be grouped into eight general categories: *Comprehensive Plan, Environment, Transportation, Housing, Land Use, Public Facilities, Economic Development and Implementation.* Within each of these particular topical areas, we have formulated the following basic statements of possible goals and objectives. The central ideas contained in the following list were drawn from the 1979 Comprehensive Plan. The Cox Company has elaborated upon several of these goals and interjected some new ideas where weaknesses were perceived. However, it is crucial to the success of this planning endeavor, that the County staff, officials and citizens play the primary role in formulating the goals and objectives of the Comprehensive Plan, which will shape the future of the County. This list is meant to serve solely as a point of departure for the Planning Commission.

1. Comprehensive Plan - General

• **The adopted goals and objectives set the physical, social, economic and cultural framework around which the King and Queen County Comprehensive Plan is designed. The Comprehensive Plan shall be organized, designed and implemented so as to manage growth in the County in terms of (a) future land uses, (b) scale and intensity of land uses, (c) timing and phasing of land uses, (d) timing and phasing of support infrastructure, and (e) promulgation of growth management strategies which maintain and enhance the quality of life for current and future residents.**

2. Environment

• **Protect sensitive environmental areas and state waters within the County.**

A. Preserve rivers, stream valleys, established drainageways and wetlands. These should be preserved as both an ecological resource and a visual amenity and made more accessible to the public for passive recreational activities.

B. Preserve topsoil and native vegetative cover and protect natural stream valleys from pollution and siltation by establishing an erosion and sedimentation control program and limiting development on steep slopes.

C. Protect the County's water resources and the water quality of the Chesapeake Bay from degradation by:

1. Determining the extent of the Chesapeake Bay Preservation Area within the jurisdiction using the criteria established by Chesapeake Bay Local Assistance Board and designate a Chesapeake Bay Preservation Area.
2. Complying with the development regulations set by the Chesapeake Bay Local Assistance Board and incorporate them into the comprehensive plan, zoning ordinance, subdivision ordinance, erosion and sediment control ordinance and building permit process.
3. Following the criteria set forth by the Local Assistance Board, develop and implement a local program which shall encourage and promote the conservation of water resources, their protection from further pollution, the restoration of the high quality of state waters, the growth of aquatic life, and the reduction of present levels of aquatic pollution .
4. Identifying and designating rivers eligible for State Scenic River designation.

• **Define and implement growth management procedures which incorporate both design sensitivity and environmental protection criteria on a site-specific scale.**

A. Identify environmentally sensitive areas for both existing areas of development and undeveloped properties within the County.

B. Implement contemporary urban design and environmental design criteria into the zoning, subdivision and erosion and sediment standards of the County.

• **Develop environmental design standards for new commercial land uses and development, incorporating contemporary techniques and current State and Federal policies and practices.**

A. Establish performance standards for stormwater management, water quality and open space reservations as well as encourage recreation areas with new private development.

B. Set standards for corridor protection areas along existing and proposed streets and highways by establishing Corridor Protection Districts.

3. Transportation

• A transportation plan for the location, character and capacity of transportation facilities shall be compatible with the master-planned arrangement of the County's future land uses. This plan shall be coordinated with the recommendations of the County-wide comprehensive plan and the Virginia Department of Transportation planning efforts.

• The transportation plan shall ensure road and street designs accomodate planned community development and promote traffic patterns which provide service in a safe, fast and efficient manner within the County. The location, timing and scheduling of these public improvements shall be coordinated with the "land use plan" for King and Queen County.

• The County transportation plan shall establish and recommend the reservation of the proper locations, alignments and rights-of-way for future roads and streets to ensure that these improvements can be implemented with the least public cost.

A. Identify and make recommendations to VDOT to correct any roads or highways that present safety hazards.

B. Coordinate future road alignments and improvements to existing roads with the transportation element of the Comprehensive Plan for King and Queen County.

C. Require all public and private land development proposals to incorporate the recommendations of the transportation element of the Comprehensive Plan, including the reservation of future rights-of-way and the construction of related road improvements .

D. Tailor contemporary road and street design standards to the unique land use environment of King and Queen County. These standards shall be implemented via the subdivision and site plan ordinances for the County and shall be in accord with Virginia Department of Transportation criteria.

E. Require that all private development proposals include traffic impact statements which identify the nature of future traffic conditions and analyze the degree of traffic generated by any given proposal. Traffic impact evaluations shall ensure compatibility with the transportation plan for the County.

F. Discourage private streets within single family developments. However, where private streets are to be developed, they shall be built to public street standards and shall be based on sound engineering design criteria.

G. Establish and reserve properly planned access points to undeveloped properties.

H. Develop and implement road and street design standards which are of appropriate scale and capacity to serve long-range traffic demands, while respecting the environment and scale of surrounding neighborhoods.

I. Cooperate with the Virginia Department of Transportation in creating desirable design standards and controls for country roads.

J. Set appropriate street signage standards for new development.

K. Recognize and encourage the protection of certain scenic or historical roadways by identifying and designating them as State Scenic Byways within the County.

L. Establish a system of County road names for all state and private roads.

4. Housing

• Safe, sanitary, efficient and attractive housing shall be encouraged for all citizens of the County. Housing and related land uses shall be developed in an orderly fashion compatible with, and sensitive to, the County's rural character.

A. Encourage adequate levels of decent, safe and sanitary housing opportunities for all ages and income groups while maintaining compatibility with other land use planning goals and objectives.

B. Establish minimum housing standards via the BOCA Code that include building quality, lot size, parking and drainage requirements.

C. Encourage well planned housing in "neighborhood" orientations that are compatible with the scale of existing neighborhoods in King and Queen County.

D. Encourage the rehabilitation of sub-standard housing and adopt an active housing support program in this pursuit.

E. Require the placement of manufacutured homes in designated parks or on standard lots that meet the County subdivision ordinance.

5. Land Use

• The Land Use Plan shall reflect the optimal land uses for King and Queen County at its long-range, full development scenario. Decisions regarding future land use must respect the Land Use Plan for the County. This plan represents the graphic expression of the adopted goals, objectives and growth management policies of for King and Queen County.

• The Plan shall incorporate an integrated mix of residential, commercial, and employment uses in the County which will provide adequate housing, shopping, and employment opportunities for present and future residents and permit the efficient delivery of services.

Agriculture

A. Promote agriculture and forestry as the major land use and economic activity in the County.

B. Preserve and further develop the cultural, social, economic, environmental and aesthetic benefits of an ongoing agricultural industry and community.

C. Designate in the Land Use Plan prime agricultural soil classifications and particular areeas within the County are best suited for agriculture.

D. Encourage farming practices that promote the conservation of agricultural resources and avoid the pollution or degradation of surrounding areas.

E. Promote land use and fiscal planning efforts through the Zoning and Subdivision Ordinances and land use taxation, which help alleviate the land use and economic pressures on agricultural land that may cause its premature conversion to non-agricultural uses.

F. Provide educational programs and technical assistance through government agencies and research to facilitate long-term and improved agricultural and forestry production

G. Adopt planning and zoning standards and transition zones designed to reduce potential conflicts arising from the proximity of agriculture to established or future incompatible uses.

H. Discourage non-agriculturally related uses in those areas designated prime agricultural land use areas in Land Use Plan.

Preservation

• **Create planning strategies to preserve and protect sites of historic and cultural importance and maintain the predominantly rural character of the County.**

A. Encourage private individuals to preserve historic landmarks and list them on an official register

B. Coordinate efforts to preserve historical landmarks using the Scenic Roads, Scenic River and Scenic Byways programs.

C. Enact preservation measures to protect historic buildings and places where consistent with the interests of the property owner and the community.

D. Encourage only compatible development in areas surounding historic places or buildings.

E. Encourage the preservation of the rural character of important thoroughfares and tourist corridors by the implementation of Corridor Protection Districts.

Land Development

A. Inventory and assess land development constraints and opportunities for all County properties. Employ resource-based analysis and synthesis techniques which organize unique landforms and homogenous geographical units into "planning areas" .

B. Identify and establish land areas for future physical development which have both (1) the strongest urban development potentials and (2) the physical attributes, location and orientation capable of promulgating the existing rural and historic character of King and Queen County.

C. Implement land use procedures and initiatives which will stimulate future development with "village" orientations compatible with the master land use plan for the County.

D. Reserve suitable areas for the development of "village" areas where residential, commercial, office and service employment uses could be developed in a more dense fashion

E. Encourage appropriate economic and commercial development within "Village Areas", which will provide tax revenues to balance the cost of providing public facilities for anticipated residential expansion.

F. Using the Criteria Regulations of the Chesapeake Bay Preservation Act, identify environmentally sensitive land areas which should be conserved and/or protected from future development.

G. Implement procedures which will result in the conservation of these critical areas and State waters during private development activities.

H. Channel intensive development away from critical environmental areas and Chesapeake Bay Protection Areas by encouraging the clustering of land uses on particular tracts in those areas with the highest development potentials. Sensitive

areas which lie within tracts proposed for development should be maintained in their natural state for passive and/or open space activities.

I. The implemention of future development, via zoning and subdivision regulations, shall be "performance-oriented", with specific land uses and their intensities and densities--being based on the Comprehensive Plan's methods and procedures for determining the land carrying capacity and development suitabilities. Private development applications shall include the preparation of land use suitability assessments and environment analyses based on the land uses presented in the adopted King and Queen Comprehensive Plan.

6. Public Facilities and Services

• The planning and programming of all long-range public services, utilities and facilities shall be consonant and compatible with the Land Use Plan for King and Queen County, and these public improvements shall be implemented in a way that their scope and staging shall accommodate the strategies of the Comprehensive Plan and be coordinated with each other and highway improvements when possible.

A. Plan and provide for an adequate level of utilities, facilities and public services (including health care, fire protection and rescue squad services) to all current and future residents within the County and, in so doing, recognize the interjurisdictional and regional aspects of programming the future development and expansion of certain facilities and services.

B. The nature, scale, timing and implementation of all private development proposals shall be subject to the provision of adequate and coordinated public facilities and services. Private development proposals shall provide all necessary on-site and off-site public facilities, utilities, infrastructure and recreational areas necessary to accomodate both (1) the requirements of the given development, and (2) King and Queen County comprehensive planning recommendations for adequate public facilities within the general planning area.

Water Supply

• Assume a leadership role in advancing local and regional planning and implementation programs for water supply sources to serve the long-range water supply and fire protection requirements for the County . Place an emphasis on adequate fire protection standards for new development within the County.

• Identify possible locations for furure local water impoundments and initiate water supply feasibility and engineering studies.

Solid Waste Management

• Assume a leadership role in advancing local and regional planning and implementation programs for solid waste management.

• Place priority on leading a program which identifies and meets the needs of solid waste management in King and Queen County. Both the collection and disposal of solid wastes should be addressed in this program.

• Place priority on identifying and selecting the most appropriate location for a new sanitary solid waste landfill. The new landfill site should be located so as to serve the entire County and provide sufficient capacity to accomodate the long-range solid waste disposal requirements of King and Queen County. Because of high development costs, opportunities for a large regional facility should be explored as a means to ensure that the County's long-term needs are met in the most economical manner. Long-range plans for the adaptive reuse and environmental conservation of the landfill after it is closed should be included.

- **Operating procedures for the new landfill site should be carefully established. Opportunities for joint-venture or public/private landfill operations should be fully explored. Optimally, the County should excercise a substantial degree of control over the operations of any new landfill.**

- **Develop plans for the phasing out and closing of existing landfills in the County. The County recognizes that these existing landfills are nearing their design capacity and are inappropriate for expansion.**

- **Sponsor programs, such as recycling and educational efforts, which address the State's requirements for a reduction in the volume of solid wastes.**

- **Work towards the implementation and expansion of "box collection" within rural areas. Opportunites for private collection services as a means to promote more efficient , safe and economical waste collection should be investigated.**

- **Adhere to recently adopted State requirements, which take effect July 1, 1992, in developing a solid waste management program.**

- **Privately owned landfills, including debris landfills, should not be permitted.**

Utilities

- **Initiate water and sewer feasibility studies. Coordinate the planning, timing and routing of future water and sewer demands and system requirements with a long-term capital improvements program that responds to the future land use plan.**

- **Establish provisions for adopting a Capital Improvements Plan process through which the County can better provide for long range and costly physical improvements.**

- **Prepare regional and/or interjurisdictionally-supported plans, engineering studies and implementation strategies for stormwater management to serve the needs of the County.**

Schools

- **Improve educational opportunities for present and future residents within the context of improvements to the existing public school system and physical plant.**

Parks and Recreation

- **Plan for adequately sized parks and recreational areas as new residential development occurs. Private development proposals shall include adequate space and improvements to serve the active recreational demands of each new neighborhood.**

- **Provide increased public access to waterfront areas.**

7. Economic Development

- **Support the existing economic base in King and Queen County while exploring future compatible economic opportunities that can be supported by the County's natural financial and human resources to create expanded employment and tax-revenues.**

A. Encourage retail and service development in the "village" areas as the principal means of expanding the local economic base.

B. Identify sites suitable for light industrial employment uses and reserve them for well-controlled and staged economic expansion. Encourage future office and light

industrial/technology-related land uses which are compatible with the surrounding residential and agricultural areas

C. Promote safe traffic and attractive development by establishing performance standards for all economic development-related land uses, including site buffers, landscaping and open space requirements.

D. Promote recreation as an industry.

8. Implementation

• **The King and Queen County Comprehensive Plan should be implemented via growth management tools such as the Land Use Plan, zoning ordinance, site plan controls, subdivision ordinance and other environmental and design standards which are to be incorporated into this land use planning process.**

A. The basis for the character type, and timing of future land use and development within King and Queen County and its planning areas is the adopted Land Use Plan. This plan exhibits the graphic representation of the King and Queen County Plan and is the physical expression of its adopted goals and objectives.

B. Decisions regarding the location, nature, type and intensity of future land development shall be based on the adopted Land Use Plan. This plan represents an integrated expression of the measured land holding capacities, physiographic potentials and optimal land uses for the County and its planning areas at full development.

C. Amendments to the zoning of any properties within the County should be consistant with the adopted Land Use Plan map. Deviations from the King and Queen County Comprehensive Plan should require a revision and update of the Comprehensive Plan and the Land Use Plan map prior to the consideration of any zoning amendment by the County.

D. The County shall work with all property ownership interests to encourage compliance of their development proposals with the Comprehensive Plan.

E. The County shall adopt new land use controls and growth management programs including zoning, site plan and subdivision ordinances, facilities master plans, erosion and sediment controls, environmental design standards, and urban design standards, which are required to implement the Comprehensive Plan.

• **Implement the objectives, plans and strategies of the King and Queen County Comprehensive Plan process through creative growth management techniques, while stressing the principle of design and planning "accountability" within the private development sector.**

A. Update and strengthen the existing zoning, subdivision, and site plan regulations applicable to the County. These new County regulations shall govern and take precedence over existing local zoning and subdivision controls.

B. Apply existing land use enabling legislation to coordinate the design, timing and funding of drainage and sewer systems within future development areas of the County.

C. Adopt improved environmental and hydraulic design standards and Best Management Practices for future development within the County's watersheds and other environmentally sensitive areas.

D. Improve the level of site improvements, erosion and sediment controls and building inspections.

E. Support the formation of an Economic Development Authority, at the appropriate future time, to orchestrate industrial and employment based development activities in a manner compatible with the objectives of the King and Queen County Plan.

F. Coordinate all King and Queen County planning and land-use decision making within the broader context of the County-wide comprehensive planning goals and objectives for King and Queen County.

G. The implemention of future development, via zoning and subdivision regulations, shall be "performance-oriented", with specific land uses, intensities and densities based on the Comprehensive Plan's methods and procedures for determining the land carrying capacity and development suitabilities. Private development applications shall include the preparation of land use suitability assessments and environment analyses based on the land uses presented in the adopted Comprehensive Plan.

H. Where previous and currently adopted local land use plans and growth management controls are in conflict with the goals, objectives and strategies of the Comprehensive Plan and implementation program for King and Queen County, the Updated Comprehensive Plan should govern the local decision making processes.

Chapter 2
POPULATION

POPULATION CHARACTERISTICS

Although the 1980 Census data are now somewhat outdated, they do reflect the unique demographic, social and economic characteristics of the people who live within the County of King and Queen. Particularly since the County appears to have accomodated only very moderate growth, the 1980 Census is a fairly reliable source of data from which a profile of the County's population can be drawn. Tables containing Census data are referenced below and are found at the end of each chapter.

Age

The population of King and Queen County can be divided into age cohorts, each constituting an age range of five years. Using cohorts one can more easily determine changes and trends in the population in relation to particular age groups and their needs. The growth or decline of each cohort will affect demands on County facilities and services, particularly schools, and determine the allocation land uses. As depicted in Table 1, the population of King and Queen is not highly concentrated within any age groups, however its distribution among age cohorts differs from the State of Virginia's population distribution, which is shown in Table 2. Generally, within King and Queen County, there is a lower percentage of individuals between 15 and 44 years of age and a higher percentage of older individuals between the ages of 50 and 79.

This difference in population composition may be due to a number of factors, but it is likely that younger residents are leaving the County for educational and employment reasons while older individuals are migrating into the County. This is supported both by a lack of four year colleges in close proximity that might draw college age residents into the County and by a history of higher than average unemployment in the County. The slightly higher concentration of aging residents is made up of long time residents who have chosen to remain in the region and retirees who have moved into the area to take advantage of its proximity to the water, reasonably priced land, low taxes and its unspoiled rural character. Nationally, there is a population aging trend, and in King and Queen County this sector of the population has grown steadily since 1960. At that time 19.6% of the population was over 55. In 1970, 22.9% of the population fell into this catagory and in 1980 this percentage rose to 25.3% and is projected by the State's Department of Planning and Budget to be 27% in 1990 and 29.7% in the year 2000.

Distribution

King and Queen County is one of the most rural counties in the state. According to population density, it was ranked 92 out of the 95 counties in Virginia. Using estimates of the population in 1987, there are approximately 20 people per square mile. Table 3 shows data from the 1980 Census, which are the most recent figures that have been broken down by county subdivisions. In that year the Beuna Vista district was the most populated at 2,491. The Newtown district was slightly smaller at a population of 2,236, but it had shrunk slightly since 1970, while Beuna Vista had grown by about 12%. Stevensville was the smallest at a population of 1,241 but it, had grown almost 22% since 1970.

Racial Characteristics

The percentage of non-white residents of the County decreased from 51.6% to 46.7% between 1970 and 1980 as shown in Table 4. In Beuna Vista, this sector of the population increased from 31.8% to 39.6%, while the percentage decreased in Newtown and Stevensville. It is likely that lack of employment within the County is the reason for this decline in racial composition.

Education

Following nationwide trends the population of King and Queen has increased its level of educational attainment. Whereas in 1970, the median number of school years completed by

county residents over age 25 was 9.5, in 1980 it was 11.2. Of this group 22.5% held high school degrees and 5.8 had completed 4 or more years of college in 1970. Table 5 illustrates that in1980 these percentages had increased to 42.6 and 7.6%, respectively. Although the figures represent an advancement in educational efforts, King and Queen still lags significantly behind the State as a whole. As depicted in Table 7, the 1976-77 school year, the enrollment of County students in schools within the County has dropped 28% from 1,312 students to 943. Until the 1990 Census data are published, it will be difficult to determine whether this decrease is a result of changes in the composition of the population or due to increased enrollment in schools outside the County. Likewise, the pupil-teacher ratio has dropped from 15.8 to 12.2. Enrollment in most occupational preparation programs has increased slightly. The most notable increase was in Business Education and Health Occupations, a program that was not in existence at the time of the 1979 Plan. Table 9, which was provided by the County's Board of Education, projects future needs within the County for Vocational Education programs.

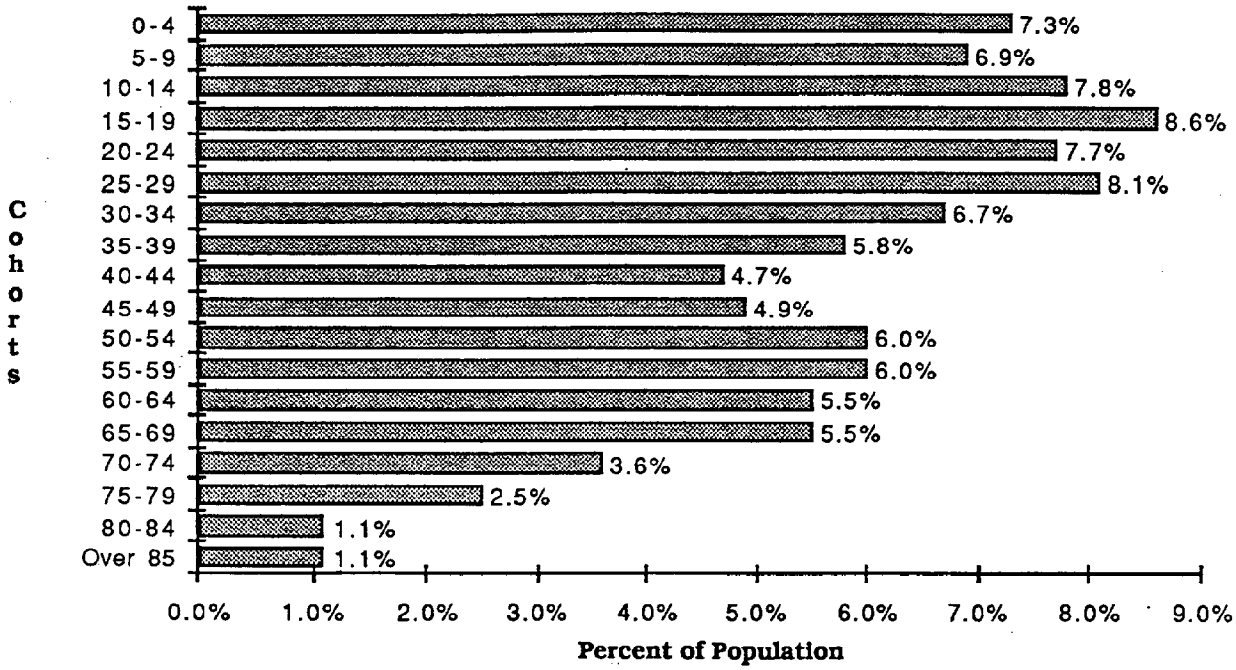
Resident Commuting Patterns

An analysis of commuting patterns within the area clearly points to the fact that King and Queen is not remotely qualified as an employment center. As illustrated in Table 10, only 673 of the 2,374 workers residing in King and Queen County actually work at a place of employment within King and Queen, the remaining 1,394 work somewhere outside the County. Over 300 workers did not report their place of work. Richmond and King William county are the largest providers of employment opportunities supplying jobs for 45.4% of the workers leaving King and Queen. Three other jurisdictions in the region supply King and Queen with 205 workers .

Applicable Reference Tables

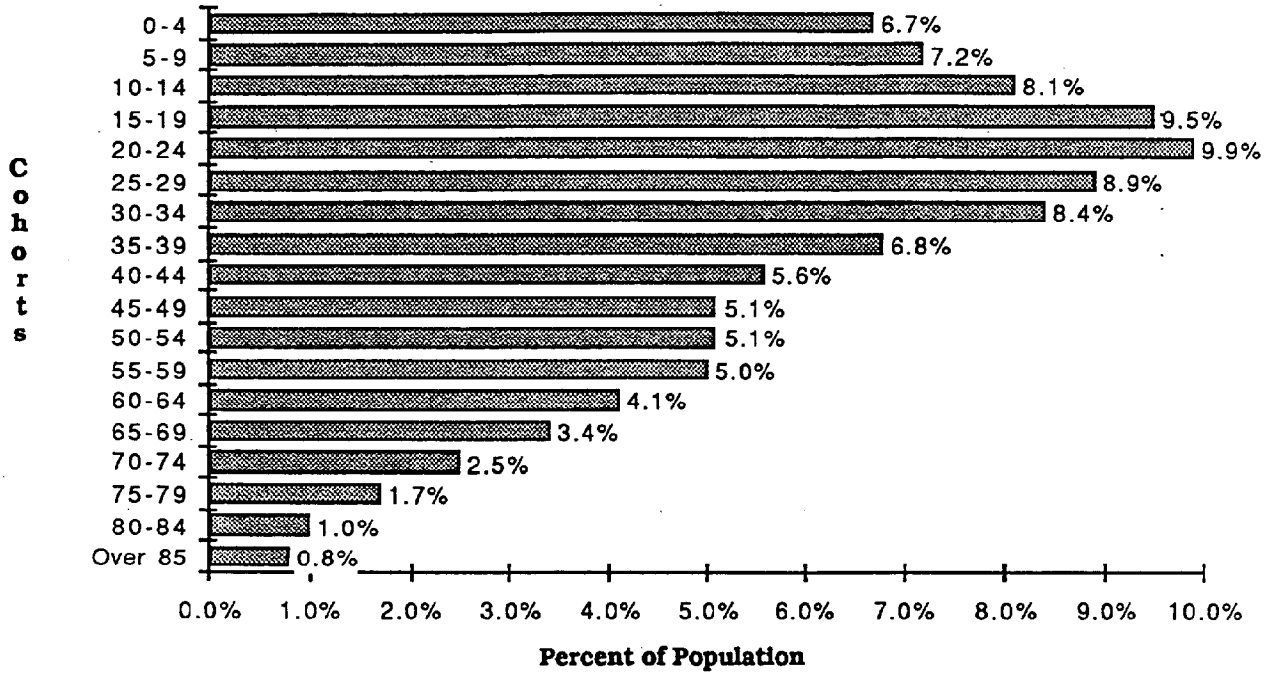
Table 1 - Age Cohorts, King and Queen County, 1980
Table 2 - Age Cohorts, State of Virginia, 1980
Table 3 - Population Distribution by Magisterial District, King and Queen County, 1980
Table 4 - Racial Characteristics, King and Queen County, 1980
Table 5 - Educational Attainment, King and Queen County, 1980
Table 6 - School Enrollments, King and Queen County, 1989-1990
Table 7 - Public School Enrollments, King and Queen County, 1976-1989
Table 8 - Enrollment in Occupational Preparation Programs, King and Queen County, 1989 - 90
Table 9 - Existing and Projected Vocational Education Needs, King and Queen County, 1989-90
Table 10 - Commuting Patterns, King and Queen County, 1980

TABLE 1
AGE COHORTS
KING AND QUEEN COUNTY, 1980



Source: U.S. Bureau of the Census

TABLE 2
AGE COHORTS
STATE OF VIRGINIA, 1980



Source: U.S. Bureau of the Census

TABLE 3
POPULATION DISTRIBUTION, BY MAGISTERIAL DISTRICT
KING AND QUEEN COUNTY, 1940-1980

District	1940	1950	1960	1970	1980
Buena Vista	2,195	2,289	2,272	2,229	2,491
Percent Change	-	4.3%	-0.7%	-1.9%	11.8%
Newtown	2,803	2,478	2,366	2,249	2,236
Percent Change	-	-11.6%	-4.5%	-4.9%	-0.6%
Stevensville	1,956	1,532	1,251	1,013	1,241
Percent Change	-	-21.7%	-18.3%	-19.0%	22.5%

Source: U.S. Bureau of the Census:

TABLE 4
RACIAL CHARACTERISTICS
KING AND QUEEN COUNTY, 1980

District	Percent White	Percent Nonwhite
Buena Vista	60.4%	39.6%
Newtown	46.6%	53.4%
Stevensville	51.0%	49.0%
County	53.3%	46.7%

Source: U.S. Bureau of the Census, 1980.

TABLE 5
EDUCATIONAL ATTAINMENT
KING AND QUEEN COUNTY, 1980

	Persons 25 Years and Older		
	Male	Female	Total
Median School Years Completed			
King and Queen County	-	-	11.2%
State	-	-	12.4%
Completed 4 Years of High School			
King and Queen County	478	545	1023
Percent of Group	26.2%	29.4%	27.8%
Percent High School Graduates			
King and Queen County	39.0%	46.1%	.42.6
State	62.8%	62.1%	62.4%
Completed 4 Years of College			
King and Queen County	61	115	176
Percent of Group	3.3%	6.2%	4.8%
State			19.1%

Source: U.S. Bureau of the Census, 1980.

TABLE 6
SCHOOL ENROLLMENTS (a)
KING AND QUEEN COUNTY, 1989-1990

School	Enrollments	Percent of Total Enrollments
Public Schools	**854**	**94.7%**
King and Queen Central High School	280	31.0%
King and Queen Elementary School	273	30.3%
Lawson-Marriott Elementary School	301	33.4%
Private Schools	**48**	**5.3%**
York Academy	48	5.3%
	902	**100.0%**

(a) County students in schools within County only.
Source: King and Queen County Board of Education

TABLE 7
PUBLIC SCHOOL ENROLLMENTS
KING AND QUEEN COUNTY, 1976-1989

Year Beginning	Number of Enrolled Students	Annual Change	Number of Teachers	Pupil-Teacher Ratio (a)
1976	1,138	-3.5%	72	15.8
1977	1,060	-6.9%	75	14.1
1978	1,068	0.8%	76	14.1
1979	996	-6.7%	73	13.6
1980	988	-0.8%	72	13.7
1981	986	-0.2%	72	13.7
1082	1,004	1.8%	72	13.9
1983	981	-2.3%	72	13.6
1984	976	-0.5%	72	13.6
1985	944	-3.3%	73	12.9
1986	916	-3.0%	74	12.4
1987	907	-1.0%	74	12.3
1988	853	-6.0%	72	11.9
1989	854	0.1%	70	12.2

(a) Average number of pupils per classroom teaching position.
Source: King and Queen County Board of Education

TABLE 8
ENROLLMENT IN OCCUPATIONAL PREPARATION PROGRAMS
KING AND QUEEN COUNTY, 1989-1990

Course	Grade 10	Grade 11	Grade 12	Total Enrollment	Graduates
Agricultural Education	17	11	4	32	4
Business Education	20	34	46	100	49
Occupational Home Economic	1	5	3	9	3
Distributive Education	--	-	--	--	--
Trade & Industrial Education	14	4	4	22	4
Disadvantaged Programs	5	1	3	9	3
Handicapped (EMRs) In Special Programs	1	4	0	5	0
Health Occupations	8	6	9	23	24

Source: King and Queen County Board of Education

TABLE 9
EXISTING AND PROJECTED VOCATIONAL EDUCATION NEEDS
KING AND QUEEN COUNTY, 1989-1990

	1989		Estimated 1990		Estimated 1991	
	Number	Percent	Number	Percent	Number	Percent
I. High School Graduates						
Total Graduates	54	100%	43	100%	42	100%
College-Bound	16	30%	14	32%	15	36%
Non-College Bound	38	70%	29	68%	27	64%
Non-College Bound Lacking Marketable Skill (a)	6	11%	0	0%	0	0%
II. Additional Students Needing Vocational Education						
Total Enrolled in VE Programs	176		200		200	
Early School Leavers Not Enrolled in VE Program	13		11		11	
Disadvantaged Not Enrolled in VE Program (b)	3		5		2	
Handicapped (EMR) Not Enrolled in VE Program	0		0		0	
Total Needing VE Programs	192	100%	216	100%	213	100%
Total Not Receiving VE	16	8%	16	7%	13	6%

(a) Graduates who did not complete an occupational preparation program in VE
(b) Students with academic or economic disadvantages requiring special services.
(c) Students mentally retared, hard of hearing, spech impaired, visually handicaped, seriously disturbed emotionally, crippled, or otherwise requiring special VE program

Source: King and Queen County Board of Education

TABLE 10
COMMUTING PATTERNS
KING AND QUEEN COUNTY, 1980

Total Residents Reporting A Place To Work	2,374
Total Employed Within the County	673
Total Commuting into the County	205
Total Commuting out of the County	1,394
Location of Employment of Employed County Residents	
King and Queen County	673
Richmond	379
King William County	376
Essex County	114
Middlesex	94
Williamsburg City	89
Caroline County	82
Henrico	55
Hanover	37
Glouchester	22
New Kent	17
Mathews	15
James City	12
Hopwell SMSA	10
Worked elsewhere	92
Not reported	307
Location of Residence of Workers Employed in County	
King and Queen County	673
Essex County	118
King William	75
Middlesex	12

Source: Transportation and Commuting in Virginia, 1980, Tayloe Murphy Institute, The University of Virginia.

HOUSEHOLDS

A household, according to the U.S. Census definition, includes all persons who occupy any given housing unit. A housing unit is a group of rooms or a single room which is occupied as a separate living quarters. Within a housing unit, there must also be either direct access from outside the building or from a common hall *or* complete kitchen facilities must be available for the exclusive use of the members of the household. A single family detached home, a townhouse unit, an apartment and a condominium are all considered single housing units. From the Census Bureau's perspective, all persons not members of households live in either: (1) group quarters, such as dormitories, barracks, and rooming houses; or (2) institutions, including hospitals, asylums and jails. In King and Queen County, none of the population was reported to live in group quarters or institutions. The households of an area are most critical in analyzing the County and regional housing market. The housing requirements of existing and future residents depend largely on the size, composition and income of households. For example, two bedroom detached units may appeal to retired elderly, singles, and students, but not to families with school-aged children. Household or family income will determine the type and cost of housing that County residents can afford.

Household Size and Composition

The average size of households in King and Queen was 2.9 in 1980. This number was obtained by comparing the population with the total number of year-round, occupied housing units. Seasonal housing units were not included. In a recent study conducted by the Middle Peninsula Planning District Commission, however, it was estimated that the average household size within the planning district has decreased from 2.8 in 1980 to 2.5 persons per household in 1987. This regional pattern may indicate similar changes taking place within the County. The small size of the average household in the County is probably a reflection of the higher precentage of individuals older than 50 years of age, many of whom no longer have children living with them. If population trends continue, and the older section of the population continues to grow, average household size could continue to decrease.

The vast majority of households in King and Queen are "family" households. A "family" is defined by the U. S. Census as a household in which two or more related individuals live together. Over 80% of the households in the County fall into this catagory. No households were reported in group or institutional quarters.

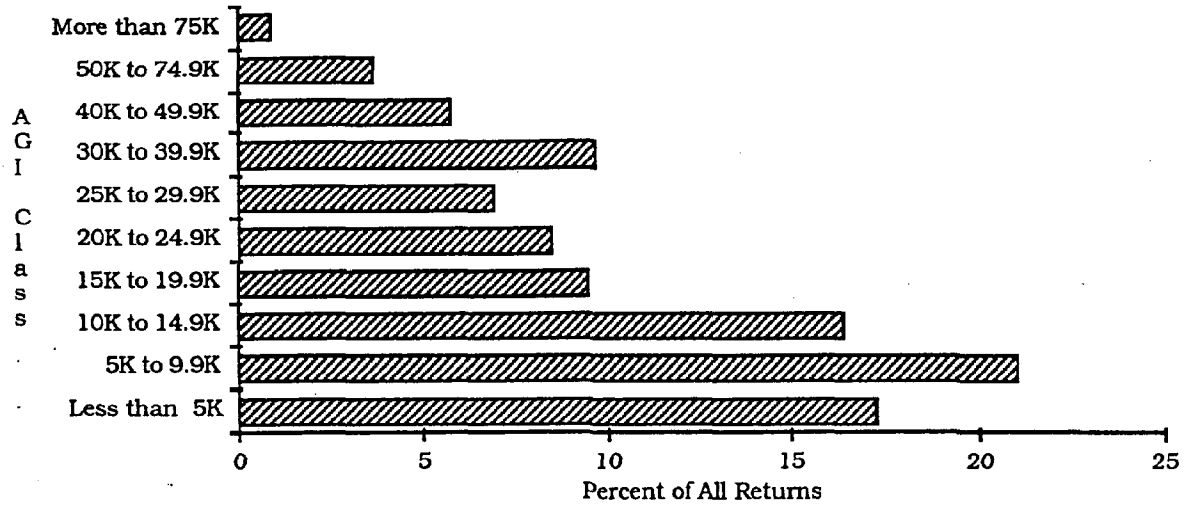
Income

For purposes of determing income levels within the County, Adjusted Gross Income, as defined by the Center for Public Service in Virginia, was examined. In most cases, this income level controls the level of retail spending patterns as well as the type and quality of housing County residents can afford. Tables 11 and 12 break down Adjusted Gross Incomes into several earning brackets to illustrate the distribution of different income levels or "AGI Classes" in the County and State. Notably, 54% of returns in King and Queen fall below $15,000. Table 13 illustrates that the median AGI in King and Queen, $13,498, falls significantly below that of the state ($18,627) with a difference of $5,129. It even falls well below the Planning District's median AGI of $16,804. Another measurement that was used to examine income, is Adjusted Gross Income Per Exemption, exemptions being the number of dependents claimed on tax returns. AGI per exemption is very similar to a per capita income measurement except that the divisor contains only the population with adjusted gross income and their dependents, rather than the total population. The AGI per exemption for the County, the Middle Peninsula Planning District and the State are shown in Table 14 and compared graphically in Table 15.

Applicable Tables

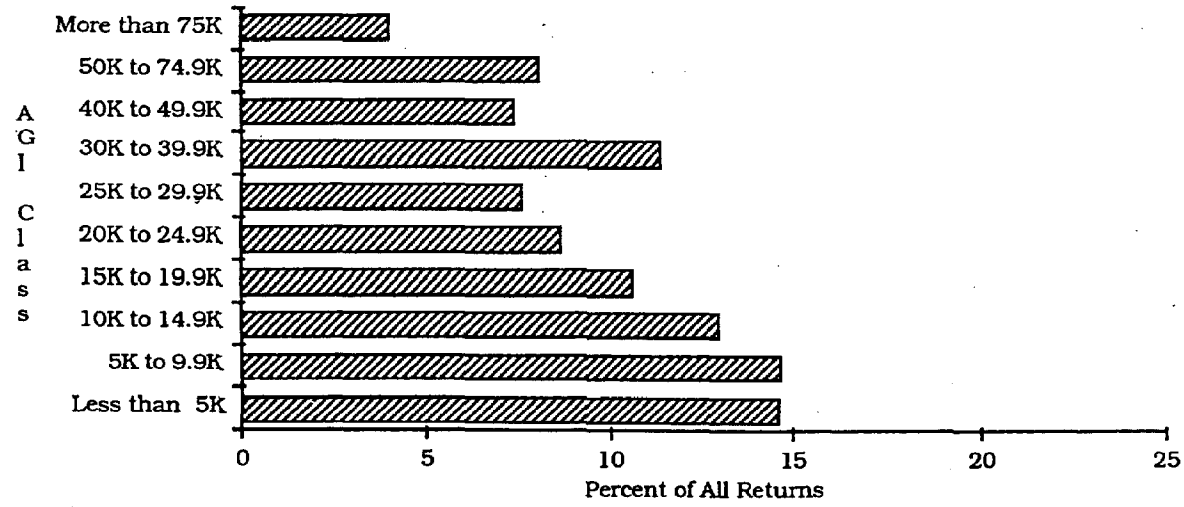
Table 11 - Adjusted Gross Income on All Returns, King and Queen County, 1986
Table 12 - Adjusted Gross Income on All Returns, State of Virginia, 1986
Table 13 - Median AGI Per Return and Distribution of AGI Classes, County and State, 1986
Table 14 - Adjusted Gross Income Per Exempetion, King and Queen County, 1986
Table 15 - Bar Chart of AGIs for King and Queen County and Virginia, 1986

TABLE 11
ADJUSTED GROSS INCOME ON ALL RETURNS
KING AND QUEEN COUNTY, 1986



Source: 1986 Virginia AGI, Center for Public Service, University of Virginia

TABLE 12
ADJUSTED GROSS INCOME ON ALL RETURNS
STATE OF VIRGINIA, 1986



Source: 1986 Virginia AGI, Center for Public Service, University of Virginia

TABLE 13
ADJUSTED GROSS INCOME ON ALL RETURNS
KING AND QUEEN COUNTY, 1986

		AGI ($)		Percentage Distribution Of Returns By AGI Class ($000) (b)									
	Number of Returns (a)	Total (000)	Median Per Return	Less Than 5.0	5 To 9.9	10.0 To 14.9	15.0 To 19.9	20.0 To 24.9	25.0 To 29.9	30.0 To 39.9	40.0 To 49.9	50.0 To 74.9	75.0 Or More
County	2,538	47,388	13,498	17.3	21.1	16.4	9.5	8.5	6.9	9.7	5.8	3.7	0.9
Planning District	27,397	630,034	16,804	16.0	16.6	13.7	10.2	9.0	8.0	12.0	6.9	5.5	2.0
Virginia	2,363,226	65,286,814	18,627	14.6	14.7	13.0	10.6	8.7	7.6	11.4	7.4	8.1	4.0

(a) Number of returns adjusted by counting two married separate returns as equivalent to one married joint or combined return.
(b) Details may not add to 100.0 due to rounding.

Source: Center for Public Service, University of Virginia, 1986 Virginia AGI.

Chapter 3
POPULATION PROJECTIONS

POPULATION PROJECTIONS

Methodology

The main purpose of providing population projections in conjunction with the Plan Update is to establish a growth benchmark against which land use decisions regarding the type, mix, character and quantity of real estate products and public services may be tested. Thus, from a comprehensive planning standpoint, it is an exercise in modelling demographic demand and real estate supply. This study focuses on those relationships for a defined planning period which extends from 1989 to 2030.

Population forecasting, at best, is an "educated guess", particularly in a rural environmental such as King and Queen. The track record of demographic forecasts and long-range planning "prognostications" which have accompanied comprehensive plans in Virginia has been abysmal. "Population booms" in rural areas, for instance, rarely have been accurately predicted and statistically identified in advance by professional demographers. For this reason, population forecasts developed in conjunction with the County's 1989 Comprehensive Plan Update should be employed only in the context of establishing a generalized analytical framework for the allocation of future land uses. These projections are not to be considered absolutes, but, rather, several demographic "targets" upon which the County's land holding capacities may be modeled.

The future number of citizens who reside within the County of King and Queen will be impacted not only by its own growth policies and ordinances, but, by those of surrounding counties and the metropolitan areas surrounding Richmond and Norfolk. Thus, our approach to population forecasting will focus on the King and Queen County, as well as the other counties in the Middle Peninsula Planning District. The Counties of Essex, Gloucester, King William, Mathews, Middlesex and King and Queen are linked by their historical past, their location near the Chesapeake Bay and their economic reliance on agriculture, forestry and more recently tourism. They will constitute the "region of demographic influence" subject to this study.

Regional Demography

The 1980 Census provided the most recent actual count of resident population and demographic composition within the County. The six county region had an estimated 1980 population of 59,987 persons. The County comprised 5,968 of that total or 9.9%. It has been estimated by the Center for Public Service at the University of Virginia, that in 1987 the population of the Planning District and the County were 72,300 and 6,300 respectively, representing an annual rate of growth of 1.9% for the District and 0.8% for the County during that period (Table 28). During the same span of time the State of Virginia grew at an estimated annual rate of 1.4. In other words, growth trends in the six county "region of demographic influence", exceed the State's annual rate by 33%. Although the population growth figures for the Planning District are skewed somewhat by rapid growth in Gloucester County, which grew at a rate of 5.6% annually and was the fastest growing locality in the State, they do reinforce a general demographic movement towards the Tidewater during the decade of the Eighties.

Population growth is the result of either natural increase or net in-migration, or both. A natural increase is simply the difference between the number of births and deaths occurring in an area. Net migration is the difference btween the number of persons moving in and moving out. Either mechanism can have a positive or negative value. Table 29 contains estimates from the Center for Public Service at the University of Virginia which show that between 1980 and 1986, 75% of King and Queen County's growth (300 of 400 persons) was accounted for by net migration, while it created only about 50% of population change through out the State as a whole.

The Virginia Department of Planning and Budget has projected the Commonweath's population on a regional and statewide basis. Between the years 1987and 2000, the State's demographers project that the region's population will increase by 14,500 persons, to reach a level of 86,800 by the end of the Century. The State has also developed specific forecasts for each locality within the defined region. Table 30 through Table 34 below, outline the State's projections of population growth in ten-year increments for the individual counties and the region.

There are certain qualifying factors which relate to the veracity of any localized growth projection. In general, they are usually more accurate when viewed for an entire region. The State forecasting models are not so finely tuned as to allow precise focus on the unique and varying factors which might affect the future development trends in any given jurisdiction. Thus, for the purposes of the 1989 Plan Update, we have employed a "regional share" approach in analyzing future population trends within the County. One must recognize that although the region might attempt to foster a unified approach to managing growth, development will occur neither uniformly nor in readily predictable paths within any of the six Middle Peninsula jurisdictions due to the varying availability of land priced to the market and serviced by adequate community facilities (water, sewer, roads, schools, police and fire protection). The County's allocation of its projected regional growth "share" becomes even more difficult to accurately forecast due to (a) the lack of public water and sewer in the County and (b) the large percentage of agricultural and vacant lands currently held for farming and forestry uses, thereby limiting the availability (supply) of properly zoned land for residential development purposes.

Thus, the Consultant's methodology to developing population projections for the Comprehensive Plan Update has been to distribute the regional growth demands (as modelled by the State's Department of Planning and Budget) using a range of potential regional population "capture" rates. In other words, the "capture" rates represent the percentage of regional population growth that will actually be housed within King and Queen's County limits. In determining this population growth "capture" increment, the following factors are involved: (1) the most probable number of people who wish to live within the County's rural environs (as compared to dwellers seeking more suburban locations in which to live "on the fringes" of their employment locations, (2) the environmental and physiographic limitations of the County's vacant and underutilized tracts to absorb growth, and (3) the long-term development objectives of large privately-held tracts in King and Queen.

County Projections

As prevously mentioned, these projections are not an absolute, rather, they represent a distant "target" of what may occur as well as the accompanying challenge to respond to most probable growth impacts: The County, through its planning implementation tools (zoning, subdivision standards, site plan requirements, utilities, road alignments, official map, and Chesapeake Bay Area Program, etc.) can shape the amount, the type, the quality, the placement and, to some degree, the timing of growth within its boundaries. It is the purpose of the 1988 Plan Update to employ these projections to orchestrate and serve the most efficient allocation of land uses, not to fix future land uses and household expansion in absolute terms.

We have projected possible population scenarios using two methods. The first, illustrated in Table 35 and Table 36, is tied to projections by the Center for Public Service for Middle Peninsula regional growth. These projections are comparatively accurate because they are calculated for a fairly broad region. The State's population projections for the County, which are based on an average of 4.4% of the region's total growth, have been used for the "low end" of the 1987-2030 growth projections as shown in the following tables. In these projections regional population growth was held steady at 11,300 persons for each decade up to the year 2030, accordingly, King and Queen County is projected to grow by 500 persons every decade. We have also tested a 6.0% capture rate as another "low end" growth rate for the forty year projection period. A different set of regional "capture" rates have been used to compute the "intermediate" and "high end" of the range. These projections rest on the assumption that King

and Queen may attract a greater percentage of regional growth than in the past, as more people decide to live in a rural environment and as the suburban fringe of Richmond continues to extend outward. A uniform "regional capture" of 8.0% is employed for the 1987-2030 intermediate level projections. When applied to the State's growth projection for the region, this percentage yields a County population growth increment of 3,872 persons for the period 1987-2030.

The "high range" regional capture increment of 10% provides an illustration of the impact which might result from a more exponential or uncontrolled "population boom" in King and Queen. While we do not prescribe to the "high end" estimates, it is important to acknowledge their statistical aspects, given the fact that similar growth increments have been experienced in localities elsewhere in the Tidewater and Richmond regions. We believe that the "intermediate range" provides a more sound, conservative figure to use in developing the Comprehensive Plan's land use assignments and community facility demands and infrastructure support requirements. Table 37 translates population projections into household units, using an average household size of 2.5 persons. Household numbers are used more often to calculate future residential land area requirements.

The second methodology used to project population growth was based on different annual growth *rates* within the County. Projections by the Center for Public Service translate into an average annual growth rate of 0.65%, a figure which is lower than the 0.8% rate of growth experienced within the County from 1980 to 1987. Since the region as a whole is growing more rapidly than the state it is reasonable to predict that the rate of growth within the county could equal and possibly exceed the rate of growth of the State as a whole. Again, numbers representing, a low (1.0%), intermediate (1.5%) and and high (2.0%) rate of growth were used to show the long range effects of different rates of growth on the County's population. Tables 37 and 38 illustrate that at a 2.0% annual rate of growth the population within the County would be 14,762 in 2030, whereas the Center for Public Service's projection, based on an average annual growth rate of .65% would create a much smaller population of 8,700. These manipulations demonstrate that over a relatively long period of time, a fairly small increase in the rate of growth can have an enormous impact.

Residential Land Area Demands

A major study objective of the 1989 Plan Update is to identify and reserve adequate areas for future development of appropriate residential housing products. For the County of King and Queen to reach its projected Year 2000 population of 7,170 to 8,150 persons, a range of new housing products of varying size, density and pricing will likely be accommodated within the County limits. The vast majority of these housing units will be built upon currently vacant property.

For planning purposes, it is important to project a future average County household size *(the number of persons living in a housing unit)* in order to forecast the number and type of housing units that may be required to shelter an additional 870 to 1850 residents. in the year 2000. The 1980 Census revealed that the average County household contained 2.9 persons. However in the Comprehensive Water Quality Management Plan for the Middle Peninsula written by the Middle Peninsula Planning District Commision in 1989, it was determined that the average household size had decreased to aproximately 2.5 persons per household in 1987. While this figure is relatively low, it reinforces the emerging County trend towards an increasing proportion of "empty-nester" and "retirement" household formations. Thus, using an average household size of 2.5 persons, 348 to 740 new King and Queen County households could be formed by the year 2000 and 300 to 714 more could be created by the year 2010.

The amount of land that will be required to accomodate new housing units created between 1990 and 2000, will be a function of the density of residential development that is allowed for differing housing products within the County. For example, one may distribute the projected increase in households for the year 2000 (348 to 740) in a manner that is based on past and

present trends in zoning and land use. Currently, several rural residential districts exist in the County. The Village Residential (VR) district and the Residential district allow lots as small as 40,000 square feet (.92 acres) where there is no central water and sewer. The Low Density Rural district allows minimum lot sizes of 2 acres if they front on State maintained roads and five acre minimum lot sizes fronting on other than State maintained roads. Future development, caused by the growth of the County's population, may be allocated to the different districts in any number of ways. For example, by assuming that half the new households will locate in the zones requiring lots of 40,000 square feet and half will locate in zones requiring 5 acre lots, from 500 to aproximately 1000 acres would be needed for this residential growth. Calculations add in a factor for required right of ways. In more densely populated districts this factor is .3, while in very large lot districts it might be reduced to .2 or .1. Table 39 shows calculations, which use a variety of possible allocations into both existing and prospective density zones.

By using the development densities such as these, that currently exist through the County zoning ordinance and by testing other densities that could be created through the planning process, one can create clearer visions of how future residential growth in the County might be accomodated and how it could drastically change the historic character of King and Queen County. If contained in dense residential zones, future residential growth could be fairly compact and most of the County's land could be preserved for its traditional use. On the other hand, if it is allowed to sprawl, valuable farm land, open space and scenic roadways will be destroyed. These calculations can be used to help the County to determine future land use requirements in existing and future districts, which may be designed to address environmentally sensitive areas and agricultural and forestry preservation areas.

The demand for housing types is also influenced by other factors, including the size of the household, household composition and household income. In adhering to County housing goals, the Plan's residential land use designations should allow enough flexibility to provide housing opportunities for persons of all economic backgrounds, in particular persons who are employed within the County proper. Since the Comprehensive Plan's housing policy establishes that all types of housing should be accomodated, the planning process should strive to reserve adequate and sufficient residential land areas for housing orientations satisfying the full range of potential development densities. At the same time, the County does not provide public water and sewer. Until public utilities are provided, the County must also factor into its minimum lot sizes the land area requirements for primary and back-up septic fields and wells. This will limit the County's ability to truly concentrate new residential growth.

The County must always consider very long range growth. While the next decade is the focus of this plan, growth will also occur in the following decades. Although the County may not immediatly zone for land area requirements that will not be present until 2030, expansion potential should be considered in the creation and placement of any new zoning districts.

Applicable Tables

Table 26 - Historical Growth, King and Queen County 1940-1980
TAble 27 - Historical Growth, King and Queen County and Region, 1970-1980
Table 28 - Estimated Growth, King and Queen county and Region, 1980-87
Table 29 - Components of Change, King and Queen County and Region, 1980-1986
Table 30 - Projected Growth: 1980-1990, King and Queen County
Table 31 - Projected Growth: 1990-2000, King and Queen County
Table 32 - Projected Growth: 2000-2010, King and Queen County
Table 33 - Projected Growth: 2010-2020, King and Queen County
Table 34 - Projected Growth: 2020-2030, King and Queen County
Table 35 - Projections by Percent of Projected Regional Growth, King and Queen County
Table 36 - Household Projections By Percent of Regional Growth, King and Queen County
Table 37 - Population Projections By Annual Growth Rate, King and Queen County
Table 38 - Household Projections By Annual Growth Rate, King and Queen County
Table 39 - Future Land Use Requirement Alternatives

TABLE 26
HISTORICAL GROWTH
KING AND QUEEN COUNTY, 1940-1980

	1940	1950	1960	1970	1980
King and Queen County	6,954	6,299	5,889	5,491	5,968
Percent Decade Change	-	-9.4%	-6.5%	-6.8%	8.7%

Source: U.S. Bureau of the Census: Virginia Department of Intergovernmental Affairs, 1976, 1980.

TABLE 27
HISTORICAL GROWTH
KING AND QUEEN COUNTY, 1970-1980

Jurisdiction	1970 Population	1970 Population: % of Region	1970-1980 Growth Increment	1970-1980 Growth: % of Region	1980 Population	1980 Population: % of Region	Annual Growth Rate
Essex County	7,099	14.9%	1,765	14.3%	8,864	14.8%	2.2%
Gloucester County	14,059	29.5%	6,048	48.9%	20,107	33.5%	3.6%
King and Queen County	5,491	11.5%	477	3.9%	5,968	9.9%	0.8%
King William County	7,497	15.7%	1,837	14.8%	9,334	15.6%	2.2%
Mathews County	7,168	15.1%	827	6.7%	7,995	13.3%	1.1%
Middlesex County	6,295	13.2%	1,424	11.5%	7,719	12.9%	2.1%
Middle Peninsula PD	**47,609**	**100.0%**	**12,378**	**100.0%**	**59,987**	**100.0%**	**2.3%**

Source: Virginia Department of Planning and Budget, Virginia Population Projections 2000

TABLE 28
ESTIMATED GROWTH
KING AND QUEEN COUNTY 1980-1987

Jurisdiction	1980 Population	1980 Population: % of Region	1980-1987 Growth Increment	1980-1987 Growth: % of Region	1987 Population	1987 Population: % of Region	Annual Growth Rate
Essex County	8,864	14.8%	36	0.3%	8,900	12.3%	0.1%
Gloucester County	20,107	33.5%	9,293	75.5%	29,400	40.7%	5.6%
King and Queen County	5,968	9.9%	332	2.7%	6,300	8.7%	0.8%
King William County	9,334	15.6%	966	7.8%	10,300	14.2%	1.4%
Mathews County	7,995	13.3%	805	6.5%	8,800	12.2%	1.4%
Middlesex County	7,719	12.9%	881	7.2%	8,600	11.9%	1.6%
Middle Peninsula PD	**59,987**	**100.0%**	**12,313**	**100.0%**	**72,300**	**100.0%**	**1.9%**
Virginia	5,346,812		556,888		5,903,700		1.4%

Source: Virginia Department of Planning and Budget, Virginia Population Projections 2000

TABLE 29
COMPONENTS OF CHANGE
KING AND QUEEN COUNTY AND REGION, 1980-1986

Jurisdiction	Total Change		Net Migration	
	Numeric	Percent	Numeric	Percent
Essex County	0	0.0%	-200	-2.0%
Gloucester County	7,900	39.3%	7,000	34.7%
King and Queen County	400	6.0%	300	4.5%
King William County	900	9.2%	500	5.7%
Mathews County	600	8.0%	800	10.1%
Middlesex County	800	10.2%	900	11.4%
Middle Peninsula PD	**10,500**	**17.6%**	**9,300**	**15.5%**
Virginia	**447,900**	**8.4%**	**208,100**	**3.9%**

Source: Center for Public Service, University of Virginia, Estimates of the Population Of Virginia Counties and Cities :1986-1987

TABLE

TABLE 30
PROJECTED GROWTH: 1980-1990
KING AND QUEEN COUNTY AND REGION

Jurisdiction	1980 Population	1980 Population: % of Region	1980-1990 Growth Increment	1980-1990 Growth: % of Region	1990 Population	1990 Population: % of Region	Annual Growth Rate
Essex County	8,864	14.8%	436	2.8%	9,300	12.3%	0.5%
Gloucester County	20,107	33.5%	9,893	63.8%	30,000	39.7%	4.1%
King and Queen County	5,968	9.9%	732	4.7%	6,700	8.9%	1.2%
King William County	9,334	15.6%	1,666	10.7%	11,000	14.6%	1.7%
Mathews County	7,995	13.3%	1,505	9.7%	9,500	12.6%	1.7%
Middlesex County	7,719	12.9%	1,281	8.3%	9,000	11.9%	1.5%
Middle Peninsula PD	**59,987**	**100.0%**	**15,513**	**100.0%**	**75,500**	**100.0%**	**2.3%**

Source: Center for Public Service, University of Virginia. Virginia Statistical Abstract -- 1987 Edition.

TABLE 31
PROJECTED GROWTH: 1990-2000
KING AND QUEEN COUNTY AND REGION

Jurisdiction	1990 Population	1990 Population: % of Region	1990-2000 Growth Increment	1990-2000 Growth: % of Region	2000 Population	2000 Population: % of Region	Annual Growth Rate
Essex County	9,300	12.3%	400	3.5%	9,700	11.2%	0.4%
Gloucester County	30,000	39.7%	7,500	66.4%	37,500	43.2%	2.3%
King and Queen County	6,700	8.9%	500	4.4%	7,200	8.3%	0.7%
King William County	11,000	14.6%	1,000	8.8%	12,000	13.8%	0.9%
Mathews County	9,500	12.6%	1,000	8.8%	10,500	12.1%	1.0%
Middlesex County	9,000	11.9%	900	8.0%	9,900	11.4%	1.0%
Middle Peninsula PD	**75,500**	**100.0%**	**11,300**	**100.0%**	**86,800**	**100.0%**	**1.4%**

Source: Center for Public Service, University of Virginia. Virginia Statistical Abstract -- 1987 Edition.

TABLE 32
PROJECTED GROWTH: 2000-2010
KING AND QUEEN COUNTY AND REGION

Jurisdiction	2000 Population	2000 Population: % of Region	2000-2010 Growth Increment	2000-2010 Growth: % of Region	2010 Population	2010 Population: % of Region	Annual Growth Rate
Essex County	9,700	11.2%	400	3.5%	10,100	10.3%	0.4%
Gloucester County	37,500	43.2%	7,500	66.4%	45,000	45.9%	1.8%
King and Queen County	7,200	8.3%	500	4.4%	7,700	7.8%	0.7%
King William County	12,000	13.8%	1,000	8.8%	13,000	13.3%	0.8%
Mathews County	10,500	12.1%	1,000	8.8%	11,500	11.7%	0.9%
Middlesex County	9,900	11.4%	900	8.0%	10,800	11.0%	0.9%
Middle Peninsula PD	**86,800**	**100.0%**	**11,300**	**100.0%**	**98,100**	**100.0%**	**1.2%**

Source: Center for Public Service, University of Virginia. Virginia Statistical Abstract -- 1987 Edition.

TABLE 33
PROJECTED GROWTH: 2010-2020
KING AND QUEEN COUNTY AND REGION

Jurisdiction	2010 Population	2010 Population: % of Region	2010-2020 Growth Increment	2010-2020 Growth: % of Region	2020 Population	2020 Population: % of Region	Annual Growth Rate
Essex County	10,100	10.3%	400	3.5%	10,500	9.2%	0.4%
Gloucester County	45,000	45.9%	7,500	66.4%	52,500	41.1%	1.6%
King and Queen County	7,700	7.8%	500	4.4%	8,200	7.0%	0.6%
King William County	13,000	13.3%	1,000	8.8%	14,000	11.9%	0.7%
Mathews County	11,500	11.7%	1,000	8.8%	12,500	10.5%	0.8%
Middlesex County	10,800	11.0%	900	8.0%	11,700	9.9%	0.8%
Middle Peninsula PD	**98,100**	**100.0%**	**11,300**	**100.0%**	**109,400**	**100.0%**	**1.1%**

Source: Center for Public Service, University of Virginia. Virginia Statistical Abstract -- 1987 Edition.

TABLE 34
PROJECTED GROWTH: 2020-2030
KING AND QUEEN COUNTY AND REGION

Jurisdiction	2020 Population	2020 Population: % of Region	2020-2030 Growth Increment	2020-2030 Growth: % of Region	2030 Population	2030 Population: % of Region	Annual Growth Rate
Essex County	10,500	9.6%	400	3.5%	10,900	9.0%	0.4%
Gloucester County	52,500	48.0%	7,500	66.4%	60,000	49.7%	1.3%
King and Queen County	8,200	7.5%	500	4.4%	8,700	7.2%	0.6%
King William County	14,000	12.8%	1,000	8.8%	15,000	12.4%	0.7%
Mathews County	12,500	11.4%	1,000	8.8%	13,500	11.2%	0.8%
Middlesex County	11,700	10.7%	900	8.0%	12,600	10.4%	0.7%
Middle Peninsula PD	**109,400**	**100.0%**	**11,300**	**100.0%**	**120,700**	**100.0%**	**1.0%**

Source: Center for Public Service, University of Virginia. Virginia Statistical Abstract -- 1987 Edition.

TABLE 35
KING AND QUEEN COUNTY
PROJECTIONS BY PERCENT OF PROJECTED REGIONAL GROWTH

Regional Growth		(3,200)	(11,300)	(11,300)	(11,300)	(11,300)
Growth Share of Region	1987(a) Population	1990 Population	2000 Population	2010 Population	2020 Population	2030 Population
State Projections (a)	6,300	6,700	7,200	7,700	8,200	8,700
6%	6300	6,492	7,170	7,848	8,526	9,204
8%	6,300	6,556	7,460	8,364	9,268	10,172
10%	6,300	6,620	7,750	8,880	10,010	11,140

(a) State projections were taken from Virginia Statistical Abstract- 1987 Edition published by the Center for Public Service at the University of Virginia

Source: The Cox Company

TABLE 36
HOUSEHOLD PROJECTIONS BY PERCENT OF REGIONAL GROWTH
KING AND QUEEN COUNTY

Regional Growth		(3,200)	(11,300)	(11,300)	(11,300)	(11,300)
Growth Share of Region	1987 Households	1990 Households	2000 Households	2010 Households	2020 Households	2030 Households
State Projections(a)	2,520	2,680	2,880	3,080	3,280	3,480
6%	2,520	2,597	2,868	3,139	3,410	3,682
8%	2,520	2,622	2,984	3,346	3,707	4,069
10%	2,520	2,648	3,100	3,552	4,004	4,456

(a) Extrapolated from population estimates in "Estimates of the Population of Virginia Counties and Cities 1986 and 1987" published by the Center for Public Service at the University of Virginia, using an average household size of 2.5 persons.

Source: The Cox Company

TABLE 37
POPULATION PROJECTIONS BY ANNUAL GROWTH RATE
KING AND QUEEN COUNTY

Annual Growth Rate	1987 Population	1990 Population	2000 Population	2010 Population	2020 Population	2030 Population
State Projection (a)	6,300	6,700	7,200	7,700	8,200	8,700
1.0%	6,300	6,491	7,170	7,920	8,749	9,664
1.5%	6,300	6,588	7,645	8,873	10,297	11,950
2.0%	6,300	6,686	8,150	9,934	12,110	14,762

(a) State projections were taken from "Virginia Statistical Abstract-1987 Edition, published by the Center for Public Service, University of Virginia.

Source: The Cox Company

TABLE 38
KING AND QUEEN COUNTY
HOUSEHOLD PROJECTIONS BY ANNUAL GROWTH RATE

Annual Growth Rate	1987 Households	1990 Households	2000 Households	2010 Households	2020 Households	2030 Households
State Population Projections(a)	2,520	2,680	2,880	3,080	3,280	3,480
1.0%	2,520	2,596	2,868	3,168	3,499	3,866
1.5%	2,520	2,635	3,058	3,549	4,119	4,780
2.0%	2,520	2,674	3,260	3,974	4,844	5,905

(a) Extrapolated from population estimates in "Estimates of the Population of Virginia Counties and Cities 1986 and 1987" published by the Center for Public Service at the University of Virginia, using an average household size of 2.5 persons.

Source: The Cox Company

ILLUSTRATION OF POPULATION PROJECTION ALTERNATIVES AT DIFFERENT RATES KING AND QUEEN COUNTY

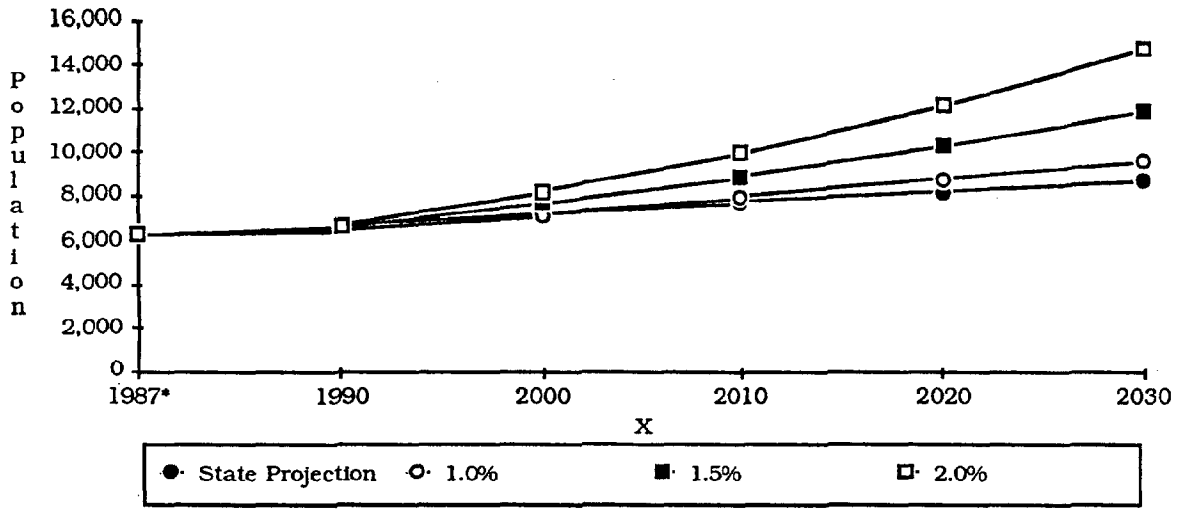


TABLE 39
FUTURE LAND USE REQUIREMENT ALTERNATIVES
KING AND QUEEN COUNTY, 2000

Projected New Households- 348 - 740

Zoning District Alternatives	Density
Village Residential/Residential (	1 acre lots
Low Density Rural	2-5 acres lots
Agricultural	20 acres lots

Formula: Number of Units x Number of acres x (.7, .8, or .9 depending on lot size)

Lot Mix Alternative	Lot Size Mix	Acres Absorbed (a)
A	100% in 1 acre lots	500 - 1060
B	100% in 2 acre lots	870 - 1850
C	100% in 5 acre lots	2175 - 4625
D	33% in 1 acre lots 33% in 2 acre lots 33% in 5 acre lots	1180 - 2510
E	50% in 1 acre lots 50% in 5 acre lots	1340 - 2850
F	50% in 2 acre lots 50% in 20 acre lots	4300 - 9150
G	25% in 1 acre lots 25% in 2 acre lots 50% in 20 acre lots	4210 - 8950

(a) Acreage is approximate. Factors for right of ways are: (.3) for 1 acre lots, (.2) for 2 acre lots and (.1) for 20 acre lots.

Chapter 4
LAND USE

LAND USE

Residential

Compared to the rest of the State, the rate of residential development within King and Queen County has been relatively slow. The number of units created each year in the County has fluctuated from year to year, but the average number of units created has remained fairly stable. The 1979 Comprehensive Plan contained a study of building permits issued from 1975 to 1977. During those three years the average number of permits issued, including those for manufactured homes, was 78. Table 16 illustrates that the average number of permits issued from 1982 to 1988 was 80. The most significant change in this data is the decrease in permits issued for permanent dwellings as compared to the number of permits issued for manufactured homes. From 1975 to 1977, an average of 38 permits for permanent dwellings were issued each year, while the average for manufactured homes was 40. From 1982 to 1988, the average number of permits issued for permanent dwellings decreased to 21 while the average number of permits issued for manufactured homes increased to 59 each year. This type of residential development reflects the County's comparatively low household income.

Most new lots have been created along major roads, particularly along the southern portion of Route 14 and all along Route 33. This is, at least in part, due to the fact that most of the County is in environmentally sensitive areas of wetlands, flood plains and steep slopes. As a result, the roads in the County historically have been built along the long stretches of soils most suited for development. In addition, almost 25% of the acreage in the County is owned by corporate forestry interests and, hence, remains undeveloped. Only a few subdivisions, often served by private roads, have been developed in recent years. Although the County has tried to encouraged the development of a mobile home park, none have yet been established. As a result, manufactured homes are scattered about the County on small lots that usually front on roads.

There is a fairly high percentage (8.5%) of seasonal or vacant housing. This may be a reflection of the growing second home market within the County. As illustrated in Table 17, the quality of the existing housing stock varies greatly according to whether it is owner or renter-occupied. Predictably, the condition of owner occupied housing is superior. The most significant data related to the quality of the County's housing stock is that 32.5% of occupied rental housing lacks complete plumbing. The highest percentage of substandard or overcrowded housing is in the district of Newtown as shown in Table 18.

Village

Walkerton and Mattaponi are the most densely settled areas in King and Queen County. At the present time there approximately 40 residences in Walkerton and about 250 in the Mattaponi area. Development in both is limited by environmentally sensitve areas and nearby rivers. In addition, neither of these two settlements is served by public utilities, and the County has no plans to provide these services in the future. Although, there have been few problems with the land's ability to support septic systems thus far, it is highly unlikely that these soils could support continued development on lots of one acre and less. The 1990 Comprehensive Plan does not recommend the expansion of these areas. Any plans to develop these villages should be studied in a future planning process

Agricultural Land Use

Historically, agriculture has been one of the main economic activities in King and Queen County. There are four primary crops grown within the County, soybean, corn, wheat and barley. Cattle, poultry and hogs are also raised. Data gathered from the 1987 Census of Agriculture and shown in Table 20, indicates that King and Queen follows the national trend of decreasing numbers of farms, but with an increase in the average farm size. The County Extension office reported that twenty years ago there were upwards of 200 full-time crop farmers in King and Queen, while today twenty-five farmers do the bulk of the farming in the County.

However, it is important to note that many of these large farmers rent rather than own the bulk of the land they farm. The increase of farm size is an indication both of the willingness of land owners to rent out more of their land and of the ability of these farmers to farm more land more efficiently. While the number of farms has decreased, the production of at least two crops, corn and soybean, has increased (Table 21). The production of poultry also appears to be growing slowly, while the production of hogs fluctuates greatly. Generally, prices for soybean and small grains have been high in the past year and have helped some farmers to recover from the lower market prices that were paid for several previous years.

Although there is State enabling legistation that would allow King and Queen County to establish a land use taxation program to help farmers, the County has chosen not to implement such a program. There are essentially two reasons for this. The first is because the County is primarily rural and sparsely populated. This creates a situation where there is no other source of funds to offset the loss in revenue. In other words, if farmers were given a tax break on their farmland, it is likely that the property tax on their houses would go up. This situation is aggravated by the fact that the greatest proportion of the land use tax break would go to absentee landlords, in particular the Chesapeake Corporation, a forestry company that owns 24% of the land in the County and 50% of its timber. It is likely that a land use taxation program would end up costing County residents more than it would help them.

Forestry Land Use

Forestry activities occur on 153,245 acres, or over 75% of the County's land area (which is 203,584 acres (land area does not take into account acreage that is covered by water). The forestry industry, farmers and miscellaneous individuals are the largest owners of timber as depicted in Table 23. However, since 1977, farmer ownership of timberland decreased 46%. Since no other ownership catagory gained this much acreage (25,645) and since the total acreage of timberland decreased from 160,961 acres to 153,245 acres, it can be assumed that much of the loss in farmer owned timber was do to a conversion in its use. The Virginia Employment Commission reports indicate that forestry offers no employment within the County. However, these reports are misleading, perhaps due to supressed or unavailable information, as they do not seem to include known forestry activities by small or large farmers and do not include employment by corporations that are based outside the County. Practical knowledge of the County enables one to make the reasonable assumption that forestry activities do create employment within the County. Forestry also creates spin off industries, such as lumbering, and, when managed properly, performs functions that are beneficial to the natural environment.

Commercial

In recent years there has been relatively little commercial development in King and Queen County. The few commercial establishments that exist are situated on Rt. 360 and Rt. 33 along which there is a fair amount of traffic and in the "villages" of Walkerton and Mattoponi where residential development is more dense. There is one industrial park just off Rt. 36 which is not yet fully occupied and another located on Rt. 678 and 608, which is in the early stages of development.

Applicable Tables

Table 16 - Buildings Permits Issued, King and Queen County 1982-1988
Table 17 - Housing Characteristics, King and Queen County, 1980
Table 18 - Housing Characteristics By County Districts, King and Queen County, 1980
Table 19 - Agricultural Land Use, King and Queen County,
Table 20 - Number Of Farms By Size, King and Queen County, 1969, 1974, 1987
Table 21 - Agricultural Production, King and Queen County, 1981-1984
Table 22 - Total Cropland and Harvested Cropland , King and Queen County, 1982, 1987
Table 23 - Ownership of Commercial Forest Land, King and Queen County, 1986
Table 24 - Forest Inventory By Species Group, King and Queen County, 1986
Table 25 - Annual Removal/Growth of Forest By Species Group, King and Queen County, 1986

TABLE 16
BUILDING PERMITS ISSUED
KING AND QUEEN COUNTY, 1982-1989

Year	New Homes	Manufactured Homes	Total
1975	59	38	97
1976	39	51	90
1977	17	31	48
Average	**38**	**40**	**78**
1982	11	48	59
1983	18	58	76
1984	26	72	98
1985	19	66	85
1986	23	71	94
1987	28	40 + 9 Replacement	77
1988	25	51 + 1 Replacement	77
Average	**21**	**59**	**80**

Source: King and Queen County Zoning Administrator

TABLE 17
HOUSING CHARACTERISTICS
KING AND QUEEN COUNTY, 1980

Occupancy

Total Housing Units	2510
Vacant Seasonal and Migratory	214
Percent of Units	8.50%
Year-round housing units	2296
1.01 or More Persons Per Room	5.6%

Owner Occupied Units

Complete Plumbing for Exclusive Use	89.8%
Lacking Complete Plumbing for Exclusive Use	10.1%
Complete plumbing but used by another household	0.1%
Some but not all plumbing facilities	4.5%
No plumbing facilities	5.5%

Renter Occupied Units

Complete Plumbing for Exclusive Use	67.5%
Lacking Complete Plumbing for Exclusive Use	32.5%
Complete plumbing but used by another household	-
Some but not all plumbing facilities	11.1%
No plumbing facilities	21.3%

Source: U.S. Bureau of the Census, 1980

TABLE 18
HOUSING CHARACTERISTICS BY COUNTY DISTRICTS
KING AND QUEEN COUNTY, 1980

Total Number of Units

Buena Vista	1097
Newtown	872
Stevensville	541

Lacking Complete Plumbing for Exclusive Use

	Owner	Renter
Buena Vista	16.0%	15.8%
Newtown	10.7%	47.2%
Stevensville	10.7%	38.2%

Median Number of Persons

Owner	Renter
2.44	2.42
2.51	2.3
2.64	2.5

Median Number of Rooms

	Owner	Renter
Buena Vista	5.8	5.1
Newtown	5.9	5.1
Stevensville	5.8	5.4

1.01 or More Persons Per Room

Buena Vista	3.8%
Newtown	6.2%
Stevensville	8.3%

Source: U.S. Bureau of the Census, 1980

TABLE 19
AGRICULTURAL LAND USE
KING AND QUEEN COUNTY

Year	Number of Farms	Average Acreage	Total Farm Acreage	Farm Acreage as % Total Land Acreage
1959	605	Not Available	80,832	39.7%
1969	320	170.3	54,508	26.8%
1974	260	198.0	50,672	24.9%
1982	197	267.0	52,598	25.8%
1987	157	339.0	53,266	26.2%

Source: U.S. Department of Commerce, Bureau of the Census, Census of Agriculture, 1969, 1974, 1987

TABLE 20
NUMBER OF FARMS BY SIZE, 1969, 1974, 1987
KING AND QUEEN COUNTY

Size Range (Acres)	1969	1974	1987	% Change 1974-1987
0-49	90	76	40	-47.0%
50-99	82			
100-179	62	115	56	-51.3%
180-259	24			
260-499	38	49	36	-26.5%
500-999	16	12	11	-8.3%
1000 and Over	8	8	14	75.0%

Source: U.S. Department of Commerce, Bureau of the Census, Census of Agriculture, 1969, 1974, 1987

TABLE 21
AGRICULTURAL PRODUCTION
KING AND QUEEN COUNTY, 1981-1984

	1981		1982		1983		1984	
Product	Acres	Production	Acres	Production	Acres	Production	Acres	Production
Corn (a)	9,600	912.0	9,300	1113.0	5,800	255.0	11,000	1215.0
Soybean (a)	16,400	412.0	17,500	551.0	15,200	243.0	19,000	570.0
Cattle (b)		1,400		1,600		1,420		2,000
Milk Cow (b)		250		250		250		250
Hogs (b)		7,000		5,800		4,400		6,000

(a) Crops are measured in thousands of bushels.
(b) Measured in number of animals.

Source: Comprehensive Water Quality Management Plan for the Middle Peninsula, Middle Peninsula Planning District Commission, January 1989.

TABLE 22
TOTAL CROPLAND AND HARVESTED CROPLAND (a)
KING AND QUEEN COUNTY, 1982, 1987

Year	Total Cropland	Harvested Cropland
1982	34,256	32,322
1987	37,863	30,147

(a) In acres
Source: 1987 Census of Agriculture, Advance County Report, King and Queen County

TABLE 23
OWNERSHIP OF COMMERCIAL FOREST LAND (ACRES)
KING AND QUEEN COUNTY, 1986

Owner	1977	1986	% Change 1974-1987
State	320	320	0.0%
County/Municipal	417	350	-16.1%
Forest Industry	49320	57733	17.1%
Farmer	55452	29807	-46.2%
Misc. Corporate	0	2710	100.0%
Misc. Private Individ	55452	62325	12.4%
Total	160961	153245	-4.8%
Percent of Total County Land Area	79.10%	75.30%	-4.8%

Source: Virginia Division of Forestry

TABLE 24
FOREST INVENTORY BY SPECIES GROUP
KING AND QUEEN COUNTY, 1986

Species Group	Sawtimber (a) (Thousand Bd. Ft.)	Growing Stock (b) (Thousand Cubic Ft.)
Pine	298,651	114,709
Other Softwoods (c)	27,624	4,895
Soft Hardwoods (d)	176,296	67,791
Hard Hardwood	218,195	71,242
Total (all species)	720,766	258,637

Source: Virginia Division of Forestry

TABLE 25
ANNUAL REMOVAL/GROWTH OF FOREST BY SPECIES GROUP
KING AND QUEEN COUNTY, 1986

Species Group	Sawtimber (a) (Thousand Bd. Ft.)		Growing Stock (b) (Thousand Cubic Ft.)	
	Removal	Growth	Removal	Growth
Pine	12,514	19,722	3,195	6,512
Other Softwoods (c)	0	607	0	98
Soft Hardwoods (d)	511	10,725	390	3,121
Hard Hardwood (e)	3,990	9,081	1,301	2,453

(a) Softwoods 9" DBH and over; hardwoods 11"DBH and over.
(b) All merchantable trees 5" DBH and over.
(c) Coniferous Trees; cypress, hemlock, cedar, spruce and fir.
(d) Boxelder, red and silver maple, butternut, yellow poplar silver and sweetgum, magnolia, willow, sycamore, basswood, and elm.
(e) Sugarmaple, birch, hickory, beach, ash, holly,all commercial oaks and black locust.

Source: Virginia Division of Forestry

Chapter 5
THE PLANNING PROCESS

THE PLANNING PROCESS

Overview of Planning Process

In the preparation of the 1990 King and Queen County Comprehensive Plan, the planning process has been segmented into four principal areas: (1) planning research, (2) demographic and environmental analysis, (3) land use synthesis and (4) future land use recommendations. In seeking the optimal path to orchestrate future growth and to accommodate land use demands within the County, this four phase process has revolved around a systematic investigation of the natural and man-made environment in King and Queen County. The resultant comprehensive plan "product" yields a set of resource-based, future land use recommendations. This planning effort has also initiated the process of implementing the Criteria Regulations which were created by the Chesapeake Bay Local Assistance Board. Being a county within Tidewater Virginia, all future planning processes will be influenced by this legislation. The Act's primary goal--to protect and restore state waters--will become one of the underlying tenents in the County's planning of its future.

Due to an insufficieny of detailed mapping information regarding the County's physical, soils and geologic characteristics, this effort is merely the first step in and ongoing process which County planners must direct, primarily through the site plan and subdivision review process. As more extensive mapping resources become available, they should be incorporated into County ordinances and maps, but the primary vehicle for obtaining this information, will be the development process itself. The burden will fall upon the developer or land owner to produce site specific information, including detailed mapping and impact studies, in order to establish the precise boundaries of environmentally sensitive areas. County planners will use this privately prepared, parcel-by parcel information in the decision making process and incorporate it into the overall County information base.

Upon an exhaustive analysis of King and Queen County's resources, the physical attributes of the comprehensive land use plan can be logically resolved This is done through a process of comparative analyses in which a range of alternative land use allocation concepts are weighed against the measured physical, social, ecological and economic realities of the County. In theory, the recommended land use plan is one which:

1. *Best accommodates the County's planning goals and objectives while balancing the individual rights of the landowner with those of the entire citizentry of King and Queen: and*

2. *Is capable of being implemented within the context of satisfying both (a) the marketplace demands, and (b) the ability of the local government to responsibly supply municipal services and infrastructure; and*

3. *Provides positive County-wide benefits with the least negative impact on the measured values making up the existing physical, social, political and economic environment; and*

4. *Responds to State mandated statutues and obligation to protect and restore Bay waters and sensitive environmental areas.*

The land carrying capacities of ecologically sensitive areas, such as wetlands and shorelines which perform important water quality protection functions, are to be considered principal determinants in the allocation of land use and in setting rational limitations on future growth. The conservation of agricultural and forestry areas must also be given strong attention in establishing the nature and location of future land uses. In this respect, the underlying planning thesis is that the County, as long as it meets minimum standards of compliance with the Chesapeake Bay Preservation Act, can employ its own rational value system in preparing a long-range vision for its future through the adoption of this updated Comprehensive Plan. This

must be achieved through a systematic planning process rather than through the sometimes obscure and artificial criteria employed in drawing conventional zoning districts and "first generation" land use plans.

The current planning process for King and Queen County underscores the wisdom of establishing future land use patterns based on environmental limitations and physiographic potentials, as opposed to simply organizing land use patterns by following property lines and political boundaries. It affirms that zoning cannot be considered a truly useful planning tool for the County unless and until environmental resource plans upon which zoning is based, are drawn to reflect the intrinsic development suitabilities of the land.

The first and second stages in the County's planning efforts have been to collect and analyze all available data and background information to create a generalized physiographic and land use model of the County's 203,584 acres. This has been recorded in graphic reference exhibits which can be used to address the County's environmental and ecological systems, cultural resources, man-made systems and infrastructure characteristics. These may also be helpful in designating the generalized locations for Resource Protecton Areas (RPAs) and Resource Management Areas (RMAs) as defined by the Criteria Regulations of the Chesapeake Bay Preservation Act.

Environmental resource maps for the County at this stage are general in nature. However, over time, these maps will be expanded, and should be considered "evolutionary" in that they will be periodically updated as new mapping sources are provided by State and Federal agencies. For example, soils maps are insufficient to make detailed assessments of site-specific development proposals. However, as more comprehensive and detailed information becomes available through the completion of King and Queen's soils mapping, this work should be incorporated into the County's "determinant" mapping base.

In addition, an integral aspect of the planning process will be the responsibility which is given to prospective developers to provide up-to-date and detailed, site specific information before any development proposals are approved by the County. Hence, a thorough knowledge of the County's environmental limitations and capacities will gradually be attained. This process will insure that future development and planning decisions are well founded. Eventually the maps and subsequent development impact studies should contain the following information:

1. *Surficial geology*
2. *Soils groupings and highly sensitive soils*
3. *Hydrologic environments and floodplains*
4. *Soil drainage environments*
5. *Existing vegetation*
6. *Physiographic features*
7. *Slopes and contours*
8. *Existing land use*
9. *Historic landmarks and cultural features*
10. *Tidal and non-tidal wetlands*
11. *Public facilities and infrastructure*
12. *Ambiance and County scale*

County Planning Area Concepts

The third stage of the planning process--land use synthesis--is to establish the social and ecological values inherent in the above processes which must set the tone of any prescription for the utilization of King and Queen County Area's natural resources. This synthesis produced a number of discrete "Planning Areas" (or geo-physical planning units), transportation planning "Corridors" and designated Chesapeake Bay Preservation Areas within the County. Each will have its own set of unique potentials and limitations for the different types of future land uses which may be demanded in King and Queen. This is done in order to identify internal geographical components having prime development potentials or severe limitations. In certain instances, the transportation "Corridors" overlap more than one "Planning Area". This is due to the need to address future land uses in the context of their "linearity" along a particular route.

When the "Planning Areas" and Chesapeake Bay Preservation Areas are viewed in the aggregate, growth management recommendations can be drawn to ensure that the County's future land use demands are directed to those Planning Areas having both (a) optimal development suitabilities and (b) opportunities to enhance the social values and planning goals of the County.

Land Development Status Concepts

As cited above, the result of this County-wide analysis was the segregation of King and Queen into "Planning Areas" and "Corridors" each of which has a unique and specific physical, environmental and social character. From a standpoint of their dominant existing land use status, the land within the prescribed "Planning Areas"and "Corridors" has been further evaluated and classified into one or more of three primary development stages: ***(1) Rural Village/Stable Areas, (2) Corridor Infill/Transition Areas, and (3) Agricultural/Undeveloped Areas.*** The development "stage", or status, of planning areas represents a key parameter in designating future land uses. While it is important to recognize that most of the County's development has not been "planned" (in an academic sense), the current planning process strives to establish future development patterns which are based on sound planning principles and which respect established land uses.

Rural Villages/Stable Areas

One of the Plan's goals is the preservation of the County's existing stable areas--residential pockets, commercial nodes, institutional properties, and public uses. Most of this type of development occurs in existing Rural Village areas within the County. The small villages of Mattaponi and Walkerton represent, for the most part, the County's "stable areas". The main feature of a stable area is the existence of a sufficient critical mass of land development to establish a definite character which is not likely to be altered by any reasonable future development of the remaining vacant land in the immediate vicinity. Because of the environmentally sensitive areas around these village settlements and a lack of public utilities, their expanded development is unlikely in the near future. However, this is not to say these areas are not subject to future development pressures.

The protection and enhancement of "stable areas" involves taking actions to reinforce the existing character of the area and preventing any compromise or degradation of this character by poorly planned development. King and Queen must pay careful attention to near-term pressures to both (a) expand and (b) internally intensify existing stable areas. The Plan should carefully review any development within villages and stable areas in the context of architectural integrity, environmental impacts, transportation limitations, and requirements for public infrastructure. Villages should be a focus of continued study by the Planning Commission upon adoption of this Comprehensive Plan.

Corridor Infill/Transition Areas

The main feature that characterizes the "corridor infill/transition" areas is a partially developed suburban quality or, for example, spot development such as that which exists along Rt. 360 and Rt. 33. Such random development creates opportunities for the incorporation of new and/or revitalized development patterns within the context of the old. The Plan has primarly focused on the "infill/transition" aspects of certain segments of more heavily travelled highways for the purpose of devising strategies to ensure that new commercial or residential development program is appropriately-scaled and buffered .

These areas, traditionally, are the most difficult for local government to control through zoning and site plan review. Private landowners will attempt to benefit from previous governmental land use "mistakes" (spot zoning, haphazard site planning, insensitivity to the environment) by trying to establish "precedents" for the continued, controlled infilling of areas which are losing their rural flavor. Such infilling of existing transportation corridors creates reduced road capacity and the potential for reduced coordination of future right-of-way

requirements. Since King and Queen will not be realizing major State funded roadway improvements, it will be important that the County pay close attention to public road access issues along its rural corridors.

Agricultural/Undeveloped Areas

Within King and Queen County, undeveloped land generally has a well established agricultural or forestal land use history and tradition which should measurably influence and direct future land use decisions. Being still very rural, such areas make up the vast majority of the County. They are the dominant focus of the current planning process which will chart the limitations and potentials for the future use of these agarian properties. The Plan's adopted goals call for the continued preservation of the agarian community, emphasizing the need to control residential growth in these areas. Correspondingly, the Plan recommends that the current agricultural and rural residential zoning districts be significantly strengthened if these goals are to be achieved. The long-term protection of agricultural lands and open space is essential if King and Queen's rural ambience is to be conserved for the benefit of future generations. With few exceptions, there is little precedent for strong conservation zoning practices to be found in the Middle Penninsula and around the State's rural counties. Those few communities which have implemented meaningful conservation zoning have been successful only because of the forceful backing of their Boards and Commissions when considering incompatible development proposals. The actions of King and Queen's Board over the next ten years will set the course for all future growth in the County.

If a liassez faire mentality is taken in approaching rural area planning, King and Queen will be vulnerable to the same destructive growth problems which have adversely affected its neighboring counties to the east. At present, there is little in King and Queen's zoning controls which will prevent scattered, uncontrolled development of the County's prime agricultural lands. There exists an immediate need to resolve the weaknesses in the zoning ordinance in concert with providing resource protection controls for any development in these areas.

Planning Synthesis Process

Within the identified "Planning Areas", it is arguable that the inherent social and ecological values represented by the natural processes are, in many cases, suitable for a multiplicity of human uses: For example, moderately sloped and well-drained land may have the same suitability for residential development as for active agricultural and/or recreational uses. Similarly, areas of historic or scenic value could, at the same time, be highly desirable for tourist-oriented waterfront or commercial development. The synthesis stage in planning focuses on resolving any apparent conflicts which could exist for the individual citizen or developer whose property is subject to the guidance of the new Comprehensive Plan. This is accomplished through public workshops and hearings held prior to the adoption of the Plan.

The synthesis process will determine both the development potentials and limitations of the land in each Planning Area. Based upon its inherent suitability for development, each physical planning unit is viewed for its intrinsic suitabilities for a range of uses--urban (ie. residential, commercial or industrial), conservation, agricultural, recreational, ecological, etc. The synthesis effort makes it possible to assess each geographical area and designate an "optimal use".

Superimposed on these measurements of development suitabilities are the social, market and ecological values supported by the planning goals and economic realities in the County. These examinations have revealed that the County's areas of prime development potentials can provide abundant capacities and opportunties to absorb the community's projected growth well beyond the next century. However, the reality of this "absorption capacity" must be balanced with the County's vision for what it "wants to look like" in the twenty-first century and its desire to maintain its strong agricultural tradition.

Land Development Suitabilities

The physical components of the development suitability process allows the land to "speak for itself". Whereas most traditional zoning and comprehensive planning practices in Virginia, have allocated use categories and densities to the landscape in a uniform fashion, the process of employing scaled suitability rankings allows land use allocations to be a function of the specific character of the land to which they apply. Planning decisions can be drawn from this., but must be tempered by King and Queen's open space and preservation objectives. For instance, flat land which works better than steeply sloped land for commercial development may be more appropriately allocated to long term agricultural uses due to the productivity of the underlying soils. Virginia's enabling statutes for planning and zoning lend support to this development suitability process which applies a somewhat more sophisticated approach to orchestrating and allocating County land uses. With the adoption of the Bay Preservation legislation, the County can establish performance criteria to implement this concept.

The planning process has identified the significant physical parameters to be included in the development suitability selection. This process would be initiated in the early stages of the land development process by the developer or land owner via the preparation development impact assessments for new projects and subdivisions. Many of the features included in this list are land components which would be addressed. The County should require that the following physiographic and environmental attributes of the land be identified, mapped and and fully integrated into any land development proposal:

1. *Slopes less than ten percent (10%) are generally suitable for most land development, including agricultural and forestry uses. Under normal conditions, under this slope range physiographic rational cannot be used to justify one use over another.*

2. *Slopes in the ten to twenty percent range (10%-20%) begin to restrict more intensive development potentials, certian land uses and the overall physical capacities with a given project.*

3. *Slopes in the twenty to thirty percent range (20%-30%) pose significant capacity constraints for most types of development and development theron should be restricted.*

4. *Slopes greater than thirty percent (30%) are severely limited for most development on the County's critical hillsides should be greatly restricted and avoided to the extent feasible.*

5. *Areas of significant geologic outcroppings and sinkholes pose significant capacity constraints for urban uses and development thereon should be avoided.*

6. *Floodplains. wetlands (both tidal and non-tidal), shorelines, tributary streams, rivers, swamps and major drainage channels constitute physical systems necessary to maintain hydrologic equilibrium in a watershed and development thereon should be avoided.*

7. *Soils of low bearing capacity and high permeablilty should have restricted suitabilities for non-agricultural development and the total allocable density thereon should be restricted.*

8. *Soils of high erodability pose limitations on urban uses, and scale, density and character of development thereon should be allocated to restrict adverse environmental impacts.*

9. *Significant vegetative cover is a valued element of the County's natural system and its ability to protect state waters by natural means. The allocation of non-agricultural uses must respect the maintenance and conservation thereof.*

10. *Future land uses adjoining existing built environments must respect the scale, density and character of contiguous uses as well as the potential environmental degradation thereof.*

11. *Land areas for major public rights-of-way and easements to accommodate the public infrastructure to service related urban uses should be reserved as a part of private development proposals.*

County planners should carefully consider these land characteristics and use them as evaluation parameters for development proposals. From this information certain conclusions can be drawn with respect to: (a) the intrinsic suitability of the area for development, (b) the range of most appropriate uses within the area, (c) the land-use carrying capacity of the area for the identified urban uses, (d) sensitive environmental land units on which urban (non-agricultural) uses should be restricted, and (e) specific land units which should be reserved for facilities, infrastructure and other uses supportive of and benefitting the allocated urban (non-agricultural) uses and densities.

"Net Developable Area" Planning Concepts

The land-use yields (in terms of net densities/intensities) for any land development should be a function of the comparative suitability ratings for each area. The concept of *"net developable area"* will be introduced into the planning process, via site plan and subdivision review, to provide County planners with a quantifiable approach to estimating the land carrying capacity or suitability of each property for the proposed uses. This process potentially could be part of the County's Chesapeake Bay Preservation Program in compliance with the Chesapeake Bay Preservation Act and Criteria Regulations.

The "net developable area" methodology enables the planner and landowner to establish a more valid estimate of a given property's development capacity. For example, a Sub-Area with a gross acreage of 100 acres, but having 30 net acres of land which have been identified as unsuitable for development, would yield an intrinsic urban suitability rating equal to 70 "net developable acres" (100 "gross acres" - 30 "unsuitable acres"= 70 "net developable acres"). If this Sub-Area is designated as a Rural Village district (at 1.0 dwelling units per two net acres), the land carrying capacity for the Sub-Area would equal 35 residential single family units (70 net acres x 1.0 units/2 acres = 35 units).

For the purposes of recommending maximum development capacities for a given planning Sub-Area or parcel in the County, "effective capacity ratings" should be assigned by County planners to the critical ***environmental land units*** within the properties as they are proposed for development. *Environmental land units* include floodplains, wetlands, steep slopes, rights-of-way, and other sensitive ecological characteristics of a property. This method could also be used to implement the Bay Preservation criteria as the means of identifying land which qualifies for either the Resource Protection Area or the Resource Management Area designation. This concept enables the planner to critically assess the inherent land carrying capacity based on the environmental limitations and vulnerabilities of a given property. The "effective capacity rating" is a ratio establishing the percentage of the physical land unit qualifying for allocable density credit.

The product of the "effective capacity rating" and the area of the environmental (or ecological) land unit in question, yields the net acreage to be applied in computing the "net developable area" within a given property. As an illustration, 10 acres of a tract may be in a tidal wetland. Based on Bay protection criteria, development within a tidal wetland should be prohibited. Therefore, the Comprehensive Plan has established that the "effective capacity rating" of the wetland area is zero (0.0); therefore, the product of wetland acreage and the "effective capacity rating" is zero (10 acres x 0.0 effective capacity rating). Thereby, tidal wetlands do not contribute to the "net developable area" of the property.

In continuing with this illustration, the same tract may have 5 acres of land with slopes ranging from 10%-20%. The Comprehensive Plan allocates an "effective capacity rating" equal to 0.7 for slopes of 10%-20%. The product of the "effective capacity rating" (0.7) multiplied

times the physical land unit area (5-acres) is 3.5. Thus, a net 3.5 acres of the 5.0 gross acres in this land unit qualify for density credit in computing the development capacity of the Sub-Area. Only upon a cumulative analysis of each physical land unit and its related "effective capacity rating" can the total land holding capacity for a Sub-Area be determined.

Listed below are the physical land units and capacity ratings to be employed by the King and Queen Comprehensive Plan in determining the "net developable area" and "land holding capacities" for the any development proposal. The computation of "net developable areas" and land use yields will be subject to detailed site engineering and environmental studies which must accompany the preparation of private development application. All *"environmental land units"* should be identified and their acreages determined.

Environmental Land Unit	Effective Capacity Rating
1. Slopes (0%-10%)	1.0
2. Slopes (10%-20%)	0.7
3. Slopes (21%-30%)	0.5
4. Slopes (greater than 30%)	0.1
5. Sinkholes and Major Outcroppings	0.1
6. Public Rights-of-Way and Major Easements	0.0
7. Tidal and Non-Tidal Wetlands	0.0
8. Floodplains, Shorelines and Drainage Channels	0.0
9. Erosion Control Facilities	0.0
10. Stormwater Retention Areas	0.0

To further illustrate this performance-oriented methodology for determining "net developable area" and "development capacity", the following example may be helpful:

1. ***Illustration Assumptions:***

Planned Land Use:	Rural Village
Planned Net Density:	1 Unit Per 2 Net Acres
Sub-Area Gross Acreage:	100 Acres

2. ***Compute Gross Area of Environmental Land Units***

Planned Rights-of-Way:	20 Acres
Slopes (10%-20%):	10 Acres
Slopes (21%-30%):	5 Acres
Slopes (31%+):	2 Acres
Sinkholes:	1 Acre
Total Gross Physical Unit Area:	= 38.0 acres

3. ***Compute "Net Developable Area" of Sub-Area's Environmental Land Units:***

Planned Rights-of-Way:	20 acres	x 0.0	= 0.0 acres
Slopes (10%-20%):	10 acres	x 0.7	= 7.0 acres
Slopes (21%-30%):	5 acres	x 0.5	= 2.5 acres
Slopes (31%+):	2 acres	x 0.1	= 0.2 acres
Sinkholes:	1 acre	x 0.0	= 0.0 acres
Total Net Physical Unit Area:			= 9.7 acres

4. ***Compute "Net Developable Area" of total Sub-Area:***

Gross Sub-Area Acreage:	100.0
Total Gross Environmental Unit Acreage:	-38.0
	62.0 acres
Total Net Environmental Unit Acreage:	+ 9.7
"Net Developable Acreage":	71.7 acres

5. ***Compute Planned Carrying Capacity for "Village Residential "Use:***

1.0 dwellings unit/ per 2 netacres x 71.7 acres= 35.9 units

The application of this "performance-oriented" methodology offers an environmentally sound process through which the land use carrying capacity of a given development proposal can be measured. When the "net developable area" concept is used in conjunction with site planning and subdivision for individual development projects, the zoning district regulations, in effect, will merge conventional zoning (euclidean) standards with environmental performance standards. The end result is a more sophisticated, high quality implementation process which is more responsive to the inherent physical and ecological determinants of the land. Thus, the land is truly allowed to "speak for itself", and, in so doing, the link between comprehensive planning and zoning application is more integrally established.

One essential element of Virginia planning and zoning law is "uniformity". The "performance-oriented" approach to growth management ensures a uniform process of applying regulatory design criteria and land holding capacity programming to land areas of varying size, physiographic character, and locational attributes.

Comprehensive Plan Land Use Categories

In the following chapter, a range of land use Planning Areas have been identified for the purposes of the County's Future Land Use Plan Map. Within each planning district, a base density based on net developable areas has been established for the particular principal use. For example, densities for residential areas are expressed in terms of "dwelling units per net acre" while intensities for commercial and industrial uses are conveyed in terms of "floor area ratios" applied to net developable acres within a given property.

Chapter 6
FUTURE LAND USE RECOMMENDATIONS

FUTURE LAND USE RECOMMENDATIONS

Comprehensive Plan Land Use Categories
For the purposes of designating the future land uses for the County's Comprehensive Plan, generalized land use Planning Districts have been identified. Each district establishes a central planning "theme" which addresses the dominant planning policies, the recommended land uses, district development opportunities, and guidelines for the use of land within the particular district. The Future Land Use Map will employ the district designations to establish the land use recommendations for the County.

The Comprehensive Plan recognizes four major land use districts and one overlay district with performance standards for economic development and industrial land uses. The major planning districts focus on distinct real estate orientations which require separate planning strategies and include the following:

1. **Agriculture/Open Space Planning District**
2. **Rural Residential Planning District**
3. **Waterfront Residential Planning District**
4. **Rural Village Planning District**
5. **Economic Development Overlay District**

In the future, Chesapeake Bay overlay districts could be used in conjunction with the major planning districts in order to properly designate ecologically vulnerable land. In this way, special "overlay" design criteria could be applied to these environmentally distinctive regions of King and Queen. Overlay districts could be the formal instrument by which "environmental land units" are recognized and assigned their development capacity restraints. The Economic Development overlay serves to require special attention to potential adverse impacts of air, noise, and other negative land use attributes associated with commercial and industrial land development.

Within these planning district, a base density *range* has been established for the principal land uses. For example, the Rural Residential district has an average density of one unit per 4 to 8 net developable acres. The higher density of one unit to every four acres is the allowable average density when developed lots are *clustered* in areas most suited for development. The lower density of one unit to every eight acres is to be applied when lots are not *clustered.* The concept of *clustering* is explained in more detail below. Densities for residential areas are expressed in terms of "dwelling units per net acre" while intensities for commercial and industrial uses are conveyed in terms of "floor area ratios" applied to net developable acres within a given property. The generalized use categories and densities described in the Comprehensive Plan should be reflected in a compatible fashion by incorporating specific amendments into the zoning ordinance upon adoption of this Plan.

In recommending this set of balanced land use districts, the Comprehensive Plan has adopted the following range of categories and guidelines which are more extensively addressed on the following pages. These uses and related densities, provide the framework upon which development strategies or alternative land uses in the Planning Areas can be measured, tested and, ultimately, adopted. While the recommended districts reflect the general planning goals and objectives for the County, it is also recognized that the County wants to encourage its long-time residents to remain in the County and does not wish to impose hardships upon families who wish to subdivide their land and give lots to their children who want to settle in King and Queen County. Recommended provisions for *Family Subdivisions* and *clustering* which are explained in full at the end of this chapter, should be used in conjunction with the major recommended districts.

1. Agriculture/Open Space Planning District

The County's agricultural, forestry and open space lands are its most valued resource. The Comprehensive Plan recognizes this value as well as the need to take stronger steps to conserve this land for future generations. Farming and forestry should be considered the dominant land uses permitted within this planning district. All other uses should be considered to be secondary and supporting. The primary form of non-agricultural development within the Agriculture/Open Space District should be limited to supporting residential and assessory uses. The residential development density within the district should be scaled to discourage subdivision of land while allowing land owners the ability to divide certain portions of their property on a limited basis.

Any land development, including farming, within the district should respect the County's fragile road network by limiting access points. The clustering of residential dwellings on the lands most suited for development, should be actively encouraged. While Virginia law does not provide specific enabling legislation for the transfer of development rights (TDR), King and Queen should actively explore the voluntary use of the TDR concept with respect to fulfilling conservation objectives within the district.

Significant District Features

1. *The major land use goal in the district is to preserve and conserve the agriculture and forestry land base of the County.*
2. *Residential development is secondary to the desired primary farming and forestry objectives.*
3. *Any residential development within the district should be encouraged to use cluster site planning, with the goal of preserving the maximum possible acreage for continued agricultural use.*
4. *A maximum lot size for clustered lots should be considered at the time amendments allowing clustering are made to the zoning ordinance.*
5. *Average district density: One dwelling unit per 30 net developable acres. The average density may be increased to one dwelling unit to 20 acres if lots are clustered. The minimum size of clustered lots should be 2.0-3.0 acres where soils exhibit prime percolation characteristics.*
6. *Residential uses on any given property should not exceed the district average. Non-clustered lots should have a 30 acre minimal lot size.*
7. *Minor subdivision of land on smaller sized lots for family transfer and use purposes should be permitted within the district, provided that no more than 2 lots are divided and built upon during any ten year period. Family transfer should be accomplished only by special permit application.*
8. *Both public and private access to existing State highways should be strictly controlled and should be based on strict interpretation of VDOT sight distance requirements.*
9. *As a general guide access design guideline, no more than an average of one access point should be permitted (a) for every one thousand feet of property owner's road frontage and (b) for any ten residential lots. Clustering of residential units should be limited to new streets with appropriately located public access points.*
10. *All use of land should respect the Chesapeake Bay Preservation Act and the County's performance criteria for affected areas.*
11. *The County should initiate further studies pertaining to the voluntary use of Transferable Development Rights within the district.*
12. *Existing zoning districts governing residential development of designated agricultural land should be rewritten to enforce the minimal density and design guidelines recommended by the Comprehensive Plan.*
13. *The County should develop a program to actively assist agricultural and forestry operations in preparing land management plans for existing properties within a five year period.*

2. Rural Residential Planning District

The Plan recognizes that the scattered development of residential lots is a subtle but most damaging influence on the County's agricultural and open space conservation goals. On the other hand, the Plan seeks to intelligently accommodate the regional market demands for ex-urban residential locations for retirement, second home and commuting residents. While the location of new residential development should be channeled towards well planned villages and existing neighborhoods, the County will face pressures to permit subdivisions within its prime agricultural areas. Thus, the Rural Residential Planning District is created to recognize those limited areas where rural subdivisions can be tolerated without deleterious effects on the intended development patterns for the County.

Current zoning standards permit residential development on undersized lots anywhere in the County, without sensitivity to location, environmental characteristics and open space policies. The Rural Residential District is organized to provide enhanced control over non-agricultural uses and to permit the limited subdivision of land within the County's rural areas. It is to be employed as the principal planning district for establishing the location of rural residential development. At the same time, it must be used prudently if the Agriculture/Open Space District objectives are to succeed. For the near term, Rural Residential Districts should be allocated to only those limited areas of the County where development pressures are imminent, where existing roads can accommodate residential growth, and where there is little or no chance of public utilities being feasibly implemented. Rural residential subdivisions should be strongly encouraged to apply cluster planning principles.

Significant District Features

1. *Where recognized by the Comprehensive Plan Land Use Map, the district should be used to govern the limited residential subdivision of the County's rural land.*
2. *The development of land subject to this Rural Residential Planning District should be permitted only via a rezoning process to a new, compatibly designed zoning district. Proffer zoning principles and environmental performance standards should be fully incorporated into zoning applications.*
3. *Any rural residential development should be required to use cluster site planning with a percentage of the land set aside for permanent open space and conservation uses. A minimum one hundred foot buffer should be provided between any Agriculture/Open Space District and Rural Residential District land use.*
4. *A maximum lot size for clustered lots should be considered at the time amendments allowing clustering are made to the zoning ordinance.*
5. *Average district density: One dwelling unit per 8 net developable acres with a 5 acre minimum lot size of 8 acres. A greater density of one dwelling unit per 4 acres should be allowed if lots are clustered. The minimum size of clustered lots is 2.0 acres where soils exhibit prime percolation characteristics. Open land that has lost its development rights should be platted as such and dedicated to open space.*
6. *Minor subdivision of land on smaller sized lots for family transfer and use purposes should be permitted within the district, provided that no more than 2 lots are divided and built upon during any ten year period. Family transfer should be accomplished only by special permit application.*
7. *Access to existing State highways should be strictly controlled and should be based on strict interpretation of VDOT sight distance requirements.*
8. *As a general access design guideline, no more than an average of one access point should be permitted (a) for every one thousand feet of property owner's road frontage and (b) for every ten residential lots. Clustering of residential units should be limited to new streets with appropriately located public access points.*
9. *All use of rural residential land should respect the Chesapeake Bay Preservation Act and the County's performance criteria.*

10. *Farming and timbering operations should coordinate with local officials and prepare land management plans within a five year period.*
11. *The County should initiate further studies pertaining to the voluntary use of Transferable Development Rights within the district.*
12. *Existing zoning districts governing residential development of land should be rewritten to enforce the minimal density and design guidelines recommended by the Comprehensive Plan.*

3. Waterfront Residential Planning District

King and Queen, unlike many of its surrounding jurisdictions, has an excellent opportunity to preserve its environmentally sensitive shorelines from unkempt and scattered waterfront land subdivision. To date, the County's shorelines have not be faced with significant development pressures. However, if existing County shoreline development is a sign of things to come, the growth management program must create stronger mechanisms to ensure that King and Queen's limited waterfront resources will not be adversely depleted.

The current zoning controls for waterfront subdivisions are weak and do not sufficiently address environmental conservation issues. Current zoning encourages 1.5 to 2 acre subdivisions, a pattern that will quickly use up open space along the waterfront and possibly strain the land's ability to support septic systems. Over the coming decades as demographic influences create stronger demands for this land, waterfront areas will take on increasing economic value. In the interim, the haphazard, large lot subdivision of this land under the current waterfront district zoning should be dissuaded The long term vision for this land should be one that includes more sophisticated clustered uses which would employ contemporary utility systems and extensive environmental protection measures.

Significant District Features

1. *Where recognized by the Comprehensive Plan Land Use Map, the district should be used to govern the limited residential subdivision of the County's shoreline and waterfront land. Landowners should be encouraged to preserve and protect existing properties, while not initiating the premature subdivision of these sensitive lands.*
2. *The development of land subject to this Waterfront Residential Planning District should be permitted only via a rezoning process to a new, compatibly designed zoning district, employing the Chesapeake Bay Preservation Bay Area overlays where applicable. Proffer zoning principles should be fully incorporated into zoning applications for waterfront use.*
3. *Any waterfront residential development should be required to use cluster site planning with a significant percentage of the land set aside for permanent open space and shoreline preservation uses. A minimum one hundred foot buffer should be provided between any Agriculture/Open Space District and Waterfront Residential District land use.*
4. *Average district density: One dwelling unit per 10 net developable acres, with a minimum lot size of 8 acres. Limited clustering would be permitted at a density of one dwelling unit per net developable acre on a minimum of 3.0 acre lots, where central (public) water and sewer service are not provided. Smaller lot sizes should be permitted when served by public utilities to encourage property owners to coordinate future development in a more sophisticated fashion. Such development should employ planned unit development principles and be subject to special permit review. Such development should only be allowed if the parcel of land remaining after subdivision is put into permanent open space.*
5. *Residential uses on any given property should not exceed the district average.*
6. *Minor subdivision of land on smaller sized lots for family transfer and use purposes should be permitted within the district, provided that*

no more than 2 lots are divided and built upon during any ten year period. Family transfer should be accomplished only by special permit application.

7. *Access to existing State highways should be strictly controlled and should be based on strict interpretation of VDOT sight distance requirements.*
8. *As a general access design guideline, no more than an average of one access point should be permitted (a) for every one thousand feet of property owner's road frontage and (b) for every ten residential lots. Clustering of residential units should be limited to new streets with appropriately located public access points.*
9. *All use of land should respect the Chesapeake Bay Preservation Act and the County's performance criteria.*
10. *Landscape plans and resource protection buffer plans should be an integral aspect of any land development application. Landscape and buffer improvements should be subject to County bonding and long-term maintenance requirements.*
11. *The construction of docks should be considered only by special permit. Docks within subdivisions should be developed for common property owner's usage, with a requirement not to exceed an average of one dock per every five residences.*
12. *The County should initiate further studies pertaining to the voluntary use of Transferable Development Rights within the district.*
13. *Existing zoning districts governing residential development of land should be rewritten to enforce the minimal density and design guidelines recommended by the Comprehensive Plan. A maximum lot size for clustered lots should be part of any zoning ordinance amendment process.*

4. Rural Village Planning District

The Rural Village Planning District is intended to recognize and designate the location of existing and future pockets of village-scaled residential and commercial development. In King and Queen, as well as throughout the State, most small villages have evolved from farming communities as a place to provide affordable housing and services for a portion of the local agricultural workforce. Over the past few decades, villages within commuting distances of urban areas have taken on a dimension of serving non-agrarian residents. Village growth pressures from this new, evolving population base serve to place expanded demands on local government. At the same time, villages afford rural counties the ability to effectively channel growth into areas where more cost-effective municipal serves can be provided.

In Mattaponi and Walkerton, the County has two unique rural villages which should be viewed has having separate and distinct land use characteristics. These communities represent good examples of the value of targeting growth in areas of established development. The Plan recognizes the need to preserve the scenic, historic, cultural and land use integrity of these special settlements in King and Queen, while anticipating the reasonable expansion of these areas. In the future, other such villages may be deemed the most appropriate planning approach to effeciently accommodating new residential and commercial growth. In the traditional sense, the appropriate development of villages serves to limit residential sprawl into the rural countryside and strip commercial development along major transportation routes. Thus, it is recommended that the majority of future County development be absorbed into villages, both existing and proposed, as opposed to rural areas.

Mattaponi, Walkerton and other small rural County settlements should be planned around traditional village land use concepts. The current zoning controls for residential subdivisions are weak and do not sufficiently address environmental and utility issues common to small communities. These need to be strengthened. Both Walkerton and Mattaponi have limited geological capacities for septic drainfields, and the continued development of these areas on private, sub-standard utility systems will eventually create public health problems. On the other hand, each of these villages has room for growth, both from within and in their outlying areas.

Over the coming decades, as demographic influences create stronger demands for residential development in King and Queen, the undeveloped land in and around the villages will take on increasing economic value. In the interim, the subdivision of vacant land around the villages should be carefully studied for its long term development feasibility. While it is outside the scope of this Comprehensive Plan to recommend public water and sewer facilities, the long term vision for the villages should be that of more traditional (grid) format, employing contemporary public utility systems, small lot configurations, integrated business uses, compatible architectural and landscape forms, and extensive environmental protection measures employing Cheaspeake Bay Preservation standards.

Significant District Features

1. *Where recognized by the Comprehensive Plan Land Use Map, the district should be used to govern the residential subdivision and business development of the County's established villages and communities. Detailed village planning should examine the expansion capacity of existing communities. Landowners should be encouraged to preserve and protect existing properties in a fashion compatible with traditional village planning principles. Other locations should be studied for the future location of new villages as an alternative to locating residential and commercial growth in a scattered fashion thoughout the County's prime agricultural and environmentally sensitive areas.*
2. *The development of land subject to this Rural Village Planning District should be permitted only via a rezoning process to a new, compatibly designed zoning district. Proffer zoning principles should be fully incorporated into zoning applications for village development. Mixed-use opportunities, such as combined residences and businesses, should be considered.*
3. *Any Rural Village residential development should be required to use small lot, grid planning principles while setting aside a significant percentage of the land on the "edges" of the villages for permanent open space, park land and preservation uses. A minimum one hundred foot buffer should be provided between any Agriculture/Open Space District and Rural Village Planning District land use.*
4. *Average district density: One dwelling unit per 3 net developable acres, with a 2 acre minimum lot size. Limited clustering should be permitted at a one dwelling unit to one acre average density where it can be shown that prime soils exist for wells and septic systems, provided that the balance of the subdivided land be dedicated to managed community open space. Clustered lots should be a minimum of one acre. Residential uses within any village should not exceed the district average.*
5. *Smaller lot sizes (2 to 4 units per acre) should be permitted when served by public utlities to encourage property owners to coordinate future village development in a comprehensive, townscape fashion. The County's planning for such development should be the subject of ongoing studies targeted to the needs of each particular village or community.*
6. *Minor subdivision of land for family transfer via smaller sized lots should be permitted within the district, provided that no more than 2 lots are divided and built upon during any ten year period. Family transfer should be accomplished only by special permit application, and the permitting of building lots should be tied to a maximum time limit for construction.*
7. *Access to existing State highways should be strictly controlled and should be based on strict interpretation of VDOT sight distance requirements. The capacity and design of existing village public street intersections should be evaluated to ensure that new development does not create adverse traffic impacts.*
8. *New development in villages should respect the geometry and ordered setbacks of existing site development, provided that where existing*

development presents poor design characteristics, traditional village planning principles should be followed.

9. *Parking areas and garages should be encouraged to locate in side and rear yards, preserving the property frontages for yards and landscaping. Storage and accessory uses should be screened from public street views along with the buffering and appropriate location of refuse disposal and collection containers.*
10. *Street tree plantings should be included in the landscape planning for village lot development. Existing, mature vegetation should be conserved.*
11. *Business and limited commercial development should be integrated into village land uses, with the specific mix and density subject to further planning studies by the County. Home occupations should be permitted within residential dwellings.*
12. *All use of land should respect the Chesapeake Bay Preservation Act and the County's performance criteria.*
13. *The County should initiate further studies pertaining to the voluntary use of Transferable Development Rights within the district, with the goal of reducing by-right development within the Agriculture/Open Space Planning Districts.*
14. *Existing zoning districts governing residential development of land should be rewritten to incorporate performance zoning and design review. A special district should be drafted which focuses on village development standards and criteria.*
15. *Site design standards and sign ordinances should be refined to provide necessary guidance for village development while recognizing the historical and visual qualities of these communities.*
16. *Future planning should examine the feasibility of public facilities, utilities and other appropriate services which would be compatible with village planning principles.*

5. Economic Development Overlay District

The Comprehensive Plan recognizes that future non-agricultural industrial growth may create additional demands for the use of the County's environmentally sensitive lands. At present, commerce and industry are very limited and are located in scattered sites throughout the County. The near-term future growth trends in King and Queen's non-agarian businesses will likely to take on dispersed locational attributes. Also, there may be pressures to extend the boundaries of existing economic development uses and to accommodate new business uses adjacent thereto.

At the present time, there is no compelling reason to establish on the Comprehensive Plan site-specific locations for major economic development uses, but the location of existing uses--including the new County landfill--should be recognized. While in future decades, regional corporate business growth may view the County as a candidate location, current industrial market demands are limited to small scale operations. In accommodating new economic development, the County will be faced with entertaining industrial and commercial rezoning applications at locations throughout the County. Thus, the overlay concept provides a mechanism to apply sound economic development locational and master planning principles while, at time same time, allowing certain flexibilities in permitting locational choice for these uses.

The overlay is not intended to serve as a Comprehensive Plan "blessing" of spot zoning for industry. In particular, the Economic Overlay designations that are recommended along Rt. 360 and Rt. 33, are strategic locations where County should encourage well planned and landscaped commercial developments that have limited access to State roads. The County should avoid spot zoning along the highway and other practices that encourage strip development and unsafe traffic patterns. The overlay zone sets forth a policy that all new and expanded industry must provide a thorough locational, engineering, traffic and environmental impact assessment prior to zoning approval of business uses. Locational decisions must be selectively reviewed based on the specific characteristics of the proposed use and conditioned

on the unique characteristics of the particular use. The specific impacts of industry-neighborhood compatibility, traffic, noise, air quality, water quality, infrastructure requirements, environmental compatibility, etc.--should be the guiding factors in the County's growth management decision process.

From an implementation standpoint, the Plan's Economic Development Overlay District objectives should be incorporated into revisions to the existing zoning, subdivision, and site plan ordinances. Detailed definitions for establishing the impact assessment process should be an integral aspect of the revised industrial zoning district documentation. Requirements for industrial performance standards, traffic and engineering impact studies and environmental design criteria should be included in the ordinance update.

Additional Recommended Provisions

Clustering - It is recommended that a provison encouraging the clustering of newly created lots be implemented for each of the recommended land use districts. Such a provision would allow the subdivision of property into lots that are smaller than that which is allowed normally in the district. Clustering does not give a property owner more development rights, but it allows him to develop his land in a more cost efficient and environmentally sensitive manner, and at the same time retain the major portion of his land in its horticultural or open space use.

If a farmer has 240 net developable acrea that are within the Agriculture/Open Space district, he has 8 development rights (1 unit per 30 net developable acres x 240 acres). If the land owner/farmer decided that he must subdivide his land in order to raise cash, he has several options. If he chooses to subdivide in the conventional manner, he may subdivide the 240 acres into as many 30 acre parcels as needed. However, if the owner chooses to cluster these lots on one corner of his property which is particularly suited to development, he may develop at an average density of 1 unit per 20 acres. At this density he has 12 development rights (1 unit per 20 acres x 240 acres). Depending on the ability of the given soils to support development, lots as small as 2 to 3 acres may be created. In this scenario, the land owner might be able to subdivide his land into 11 small lots of 3 acres and retain the balance of the land (207 acres) in agricultural use. The 207 acres has lost its development rights, as will be noted on the plat, but it retains its value for other uses.

The ability to cluster benefits all three parties involved, the land owner/farmer, the County and future owners. The land owner is able of subdivide and develop more effeciently and economically because the cost of roads can be shared and septic systems and wells can be centralized. The farmer/owner is also able to keep most of his land in its original use. The future owners of the subdivided parcels, also benefit from these effeciencies and will able to purchase smaller lots in well planned neighborhoods. The County benefits because development is concentrated on the most suitable soils and vast areas of open space in the County are preserved. Furthermore, by requiring that clustered lots be serviced by a central road, a safer traffic environment is created and the County's scenic roads are preserved.

Family Subdivisions - The purpose and intent of the King and Queen Comprehensive Plan is to foster opportunities for current landowners to maintain the productive and economic use of their existing agricultural properties. While the Plan recommends an increase in the minimum lot size for the subdivision of large properties, it recognizes that existing landowners should have the oportunity to transfer property to members of one's immediate family without being subject to all of the requirements for a major subdivision.

The Plan recognizes the positive benefit of landowners and their families maintaining their agricultural operations and their place of residence in King and Queen. The strict application of conservation zoning and enhanced subdivision regulations can present hardships on the ability of landowners to

provide for their offspring. Accordingly, zoning and subdivision requirements for the transfer of land to family members should be relaxed in the following areas.

1. **Lot Size**: Family transfers (subdivision) of land should be allowed for lots of two (2.0) acres and greater regardless of the underlying zoning district. Thus, if the Agriculture/Open Space District specifies a minimum 30 acre lot size, a 2 acre lot may be developed under this family subdivision exemption.

2. **Frequency of Family Transfer**: Two transfers of family land may be permitted in any ten year period. These two transfers are development rights *in addition to* any existing development rights of a piece of property. This privilege shall be conditioned on the transferred land being duly recorded in the name of the immediate family member with a residence constructed and occupied by the family member within a five year period. The intent is that the family subdivision exemption not be used as a "loophole" to continually subdivide small lots in inappropriate locations.

The family subdivison exemption can be implemented via its adoption into the zoning and subdivision ordinance of the County. This should be done at the time other provisions of the zoning and subdivision ordinance are amended to be compatible with the 1990 Comprehensive Plan.

Chapter 7
IMPLEMENTATION

IMPLEMENTATION

Comprehensive Plan Implementation

The adoption of this Comprehensive Plan serves as only one element of a continuous growth management process for King and Queen. In pursuit of a growth management policy which emphasizes both environmental preservation and rural-area conservation, land use implementation responsibilities must be shouldered by both the public and private sector alike. However, this process must be carefully orchestrated inasmuch as development occurs incrementally. The Comprehensive Plan serves as the framework around which relevant future land use decisions are based. Its implementation must be directed by growth management tools--zoning, subdivision and site plan ordinances, architectural guidelines, etc.--which are fully integrated into the Plan's "vision" for the County. The concept of "linkage" between the Plan and these management tools has been and must continue to be a dominant planning theme in this effort.

One of the most valuable lessons learned during the update of the Comprehensive Plan is that the pursuit of quality environments and rational development programs require exhaustive work by both the private sector and the public sector. The Plan, standing alone, is insufficent to implement "good development"; neither can the current zoning and subdivision ordinances fully ensure that private development be created sensitively and with respect to the sensitive Bay preservation issues.

For King and Queen to preserve its rural ambience and sensitive environmental areas, it will take hard work and a strong political commitment to the Plan's land use goals. Growth within the County is inevitable, and, in all likelihood, will occur in the same haphazard fashion as evidenced in other rural Tidewater localities which have "subcumbed" to suburban development pressures. The lesson to be learned from these past growth management failures is very simple: The proper planning and control of growth in agricultural jurisdictions requires the same level of focused governmental planning attention as found in urban locales. While different principles apply between slow-growth rural areas and rapidly expanding suburban communities, no less effort is required, for example, to ensure that local roads are not dealt irreparable damage by the uncontrolled subdivision of frontage properties.

For King and Queen to successfully fulfill its stated land use objectives, the development of each parcel of land must be viewed within the framework of both short-range and long-range planning goals. As King and Queen develops, the full effect of the Plan will be measured by the success or failure of any given site development project or subdivision. The Plan's "vision" is defined by the many discrete decisions (both public and private) which address the matter of the location, density, scale, environmental preservation, visual quality and phasing of any particular land use application. Accordingly, the tools and methods to be incorporated into growth management efforts must focus on each aspect of the land development process.

If future growth is to be orchestrated with strengthened linkages between the planning process and land development controls, both public officials and private landowners/developers must embrace the concept of "design partnerships". This Plan seeks to identify a mechanism for an enhanced public/private dialogue at the project inception stage. Similarly, in promoting communications between the developer and regulator of the land use process, the County does not want to place an undue burden on any applicant. Therefore, this process is structured so that the involved parties can fully explore planning issues, concerns and site opportunities at the pre-planning level. As cited in this chapter, "pre-planning conferences" should be conducted prior to the preliminary plat, site plan and/or subdivision stage in the existing growth management process.

The balance of this chapter explores ways to improve King and Queen's implementation systems and land use regulations. The current subdivision and zoning ordinances are reviewed, along with suggestions for updating them to be consistent with the Plan's goals.

The essential components of the Chesapeake Bay Preservation Act are summarized, and other recommendations for enhancing the County's land development regulations are made.

Subdivision Ordinance Regulations

The subdivision ordinance is one of the principal land use implementation tools available to the County. It is used to establish the criteria for property development whenever a parcel of lot is divided for the purposes of transfer of ownership. Over the years, the subdivision ordinance will become increasingly more important as King and Queen faces the pressures related to the subdivision of its rural countryside.

A detailed review of the County's Subdivision Ordinance (as adopted October 12, 1988), found that it was competently drafted and is responsive, for the most part, to most near-term land use issues which the County will face in the future subdivision of its land. However, for it to provide sufficient protection to the County's rural environment when challenged by the pressures of suburbanization, it should be strengthened. This section serves to critique the ordinance and to offer suggestions as to where it may be improved by the future actions of the Commission and Board of Supervisors. The review comments herein reflect the experience and precedents of many other Virginia localities in working with subdivision controls within both rural and urban communities. However, these recommendations are focused on the potentially harmful land use impacts which may occur in King and Queen in the absence of ordinance enhancements.

1. Private Streets

Throughout Virginia, the issue of private streets is extremely controversial. Many communities want them, some do not. From the standpoint of public equity, private streets should not be eliminated, in our viewpoint, from any subdivision ordinance. Notwithstanding that private streets are permitted only in minor subdivisions, King and Queen officials should acknowledge the common problems associated with private streets, their design criteria, construction, and maintenance. In turn, the subdivision ordinance sections pertaining to private streets should be significantly enhanced.

With respect to pavement design, a private street should differ little from a street which would otherwise be dedicated for public use. Private street pavement standards should correspond to VDOT criteria as related to pavement wearing surfaces, sub-base materials, compaction standards and appurtenant drainage improvements. The design standards for the horizontal and vertical geometry of private streets, on the other hand, can be relaxed somewhat from conventional VDOT criteria.

King and Queen should incorporate both geometric guidelines as well as pavement design criteria for private streets based on the actual anticipated traffic loading and topographic constraints impacting the subject street. Final engineering requirements for private streets should include standard plan and profile designs, curb and/or ditch hydraulic calculations, grading studies, and erosion and sediment control measures.

Private streets are successful where subdivisions are properly designed, financed and maintained. The latter point is essential for the long-term success of private street development in King and Queen. Many developers leave urban areas to develop in rural areas because they sense that it is "easier to build" in remote localities. In many instances, second rate development is promulgated in rural areas by developers who do the absolute minimum necessary to get their subdivisions platted. On the other hand the County does not want to unduly burden landowners who wish to create, over time, a small clustered subdivision and who may not be able to afford to build a private road before selling several lots. Private driveways should be allowed for a small number of lots (3 for example). As more lots are sold off the road should be upgraded to the standards described in the above paragraphs. The County should also take measures to insure that this leniency is not used as a loophole for individuals who do not wish to pay the expense of a private road and create several small subdivisions with private roads. Such practices will not yield the benefits of clustering and will continue to chop up road frontage.

In some communities, the "rule of thumb" on private streets is that they may be permitted where is it not feasible to build public streets, but, always leaving the burden of proof on the applicant to establish why the public street won't work. The argument of economic hardship by the developer does not always hold up in this instance. Thus, the ordinance should be amended to give the Commission authority to approve or reject the use of private streets in any given subdivision application.

Subdivision "success stories" are found in Virginia's rural communities having strong design and maintenance standards. Maintenance needs to be addressed from the standpoint of requiring developments with private streets to have legally constituted homeowners and maintenance associations. In Virginia, homeowners associations are created for the principal purpose of funding and maintaining commonly owned property and facilities within a private community. Our recommendation, in this regard, is that no private street subdivision be approved without a legally viable homeowners association and officially constituted articles of incorporation for that subdivision.

In summary, the County should not approach every application for minimally designed private streets with the mentality that private streets are an "endowed right". To do so will place long-term economic burdens on the County and the eventual homeowner. There are many sad tales where property owners living on private streets have had to absorb tremendous expenses to maintain poorly built private access routes. Streets, by their nature, are public improvements. New minor subdivisions in King and Queen should be spared the potential problem of inadequately constructed private streets.

2. Public Street and Road Design Standards

All public streets within the County are subject to the design requirements of the Virginia Department of Transportation. However, flexibility as well as additional requirements in standardized VDOT design standards can be incorporated into local implementation documents. The existing County ordinance should be continually updated as new road design critieria is established by the State.

A. Alignment and Layout: Street alignment and layout should be based on the functional classification of the proposed street, the anticipated future traffic demands on that street, and the physiographic conditions impacting the construction of that street. Horizontal and vertical alignment criteria for proposed streets shall conform with the latest standards of the Virginia Department of Transportation. The current VDOT criteria for such was upgraded on January 1, 1990, and these new design regulations should be adopted by reference into King and Queen's growth management program.

B. Street Intersections: Street intersections should be spaced such that (a) two minor streets shall not intersect with a major (collector or arterial) street at a separation distance of less than two hundred feet, (b) major (collector or arterial) streets shall not intersect with a major (collector or arterial) street at a separation distance of less than six hundred feet.

C. Approach Angle: Public streets shall approach other public streets at an angle of not less than ninety degrees, unless the agent upon recommendation of VDOT shall approve a lessen angle of approach.

D. Minimum Widths: Public right-of-way widths and pavement widths shall conform to the most recent VDOT standards.

E. Cul-de-Sacs: Oftentimes, cul-de-sac street development can be employed creatively to lessen the impact of strip development along the County's existing secondary roads. Short cul-de-sacs should be employed where feasible as an option to single family residential development on these existing frontage roads. Cul-de-sacs should be no longer than six hundred feet unless the agent upon recommendation of VDOT shall approve a greater length. The cul-de-sac length

shall be measured as the horizontal distance along the centerline of the cul-de-sac from the radius of the cul-de-sac bulb to the centerline of the intersecting through street.

3. General Subdivision Guidelines

A. Stormwater Management: The subdivider shall provide for on-site stormwater management facilities in areas of the County designated for mandatory stormwater management. These facilities should be designed in keeping with the new CBLAB regulations. On-site stormwater management facilities shall be designed to retain the increased runoff from the 10-year post development storm. Stormwater management facilities should be analyzed and designed by a registered professional engineer and such designs shall conform with VDOT and other contemporary design criteria. As a minimum design criteria, the quantity and quality of stormwater runoff for newly developed properties should be equal to or less than the runoff from the property in its pre-development condition. Design analysis should address the management needs for 2, 10, and 100 year rainfall events.

B. Easements: Easement widths for public utilities should vary depending on the size, type and location of the given underground utility line. The ordinance should be amended to provide guidelines for a variable width utility scale.

C. Erosion and Sediment Control: The subdivider of any major or minor subdivision shall provide for on-site erosion and sediment control in accord with the standards and criteria provided for in the Virginia Erosion and Sediment Control Handbook. An erosion and sediment control plan shall be prepared by a registered professional engineer and submitted with any subdivision application. Erosion and sediment control plans must include an analysis of site soils and a land management program addressing temporary (in-construction) and permanent erosion control measures. Further, the E & S plan should be coordinated with the new Chesapeake Bay Preservation Act requirements.

D. Preliminary Sketch Plan Process: From the perspective of the County Planners, the sketch plan is arguably the most important step in any subdivision application process. It offers the opportunity for the County to provide comprehensive planning input to any given project and to offer the developer substantive guidelines which should improve the overall quality of a given project. Over the long haul, the sketch plan process will become very important in King and Queen's growth management efforts. There are several refinements which we suggest be incorporated into the current sketch plan requirements.

The sketch plan should provide both a graphic and narrative statement of the proposed subdivision concept. General standards for the submission of a sketch plan shall address the following: (a) size and density of development, (b) conformity with County zoning and planning, (c) proposed water and sewer facilities, (d) proposed traffic circulation plan and traffic impacts, (e) environmental impacts relating to Chesapeake Bay standards and criteria, (d) proposed stormwater management facilities, (e) phasing of development, and (f) impacts of adjoining properties.

The graphic exhibit for the sketch plan should be prepared at a scale not greater than 1"=100'. Where topographic information is available, it should be shown on the sketch plan. A formal sketch plan review should include both County and State personnel (VDOT, SCS, Health Department) where possible.

E. Preliminary Plat: The requirements for the preliminary plat submission should be expanded to include more detailed information. A representative "check list" for the preliminary plat should be developed by the County and distributed for use by any potential subdivider of land. The current King and Queen ordinance refers to

certain design plans being required at this stage. It is assumed that only preliminary designs are required with the preliminary plat. Normally, the time, expense and energy to prepare final engineering drawings for a subdivision does not occur until the preliminary plat has been approved. Thus, there should be a clear delineation between the preliminary and final plat requirements for the level of design detail for public improvements.

F. Final Plat: As with the preliminary plat, the requirements for the final plat submission should be expanded to include the more detailed engineering information. Since the preparation of engineering designs and construction specifications comes into play with the final plat, there should be a more comprehensive listing of design-related requirements and specifications. Specifically, requirements should be included addressing public improvements final designs (streets, water, sewer, drainage, etc.) stormwater management, site grading, development phasing, erosion and sediment control, floodplain identification and computations, etc. A representative "check list" for the final plat should be prepared for use by all subdividers of land.

The State Library Board now stipulates that record plats be submitted on copies ranging in size from 8.5"x11" to 24"x36". The Clerk of the Court may wish to reconsider the current 18"x23" maximum size required in the County ordinance. If a smaller size for recordation is desirable, then the ordinance should be amended to specify the smaller size. It is recommended that the County adopt the smaller format, but require that the public improvement plans be prepared at a sufficiently large scale (1"=50' minimum) to show the entire subdivided property.

G. Subdivision and Public Improvements Bonding: The County may wish to consider expanding its conditions of plat approval. They are currently written to either require full completion of improvements or, in lieu of this, the posting of a bond. Our experience has been that bonds should always be required inasmuch as they establish that the subdivider has the financial ability to complete his work before he starts it. Bonds come in different shapes and sizes. A performance bond (as noted in the ordinance) is not as secure an instrument as a subdivision bond (which is not noted in the ordinance).

The ordinance does not provide for means by which the bond can be released, based on performance and satisfactory completion. A bank or bonding agency will not issue a bond for an unrestricted period of time. Thus, the County should ensure that all subdivision bonds are issued for a time period sufficient to cover the project development. Provisions for the extension of bonds should be included to recognize instances where a developer cannot complete a project due to unforseeable and unavoidable circumstances. In any event, bond procedures must be comprehensively defined to be fully effective instruments in insuring the County against having to complete an abandoned or bankrupt subdivision. The current County bonding provisions are very open ended. Further, recent State law pertaining to subdivisions (Section 15.1-466(l)) creates further provisions which the County may want to enact.

Agricultural and Residential Zoning District Regulations

The County's zoning ordinance should be strengthened in the areas of conservation and agricultural zoning regulations. These districts do not sufficiently focus on environmental impacts associated with the development of rural farms into rural subdivisions. Further, the zoning districts do not provide an adequate mechanism to implement the strong conservation goals which have been adopted by the Planning Commission.

To achieve the goals of the Comprehensive Plan, the zoning ordinance should be substantially rewritten. These new zoning districts should be compatible with the goals and objectives for each of the four major planning district designations presented in the preceding chapters--*Agriculture/Open Space, Rural Residential, Waterfront Residential, and*

Rural Village. While it is not the task of this study to undertake such a rewrite, the County should pursue the preparation of a new zoning code in conjunction with the ongoing adoption schedule for the Chesapeake Bay regulations. In the following section, each of the major zoning district regulations have been analyzed with respect to their internal consistency with the Plan's goals and objectives as well as their relationship to the other districts.

1. Conservation District

A. While the "intent of district" section is well founded, it appears to be insufficient to address the needs of the Chesapeake Bay Criteria. For example, additional definitions pertaining to conservation areas should be added to the ordinance if it is to be maintained "on the books". Due to the structure of this district, it is important to more clearly emphasize that the C-District is intended to address critical environmental areas (unsuitable for urban development) and that it is not necessarily a district oriented for agricultural land preservation.

B. The methods by which C-District land is analytically specified should be added to the district regulations. For example, if floodplains are to be included in conservation district land, then it should be specified what degree of floodplain qualifies (such as a 50, 100, or 500 year flood elevation). Since FEMA regulations are not comprehensive, the County should require flood plain mapping of 50, 100, and 500 year floodplains, as part of the site plan approval process.

C. With the addition of new Chesapeake Bay guidelines, the thoughtful redraft of the C-District could be the preferred section the ordinance for the incorporation of lands impacted by the CBLAB regulations. If this is the case, then the C-District could be rewritten as two overlay districts employing CBLAB guidelines.

2. Agricultural District

A. While the "intent of district" section clearly states that the A-District serves to promulgate forestry and agricultural land uses, certain regulations within the text do not complement this objective. Most notable is the minimum lot size of five (5) acres per residential unit. The typical 5-acre lot serves to rapidly deplete and increase the propensity of large tract owners to subdivide their land. This lot size "eats up" road frontage and does little to promote agricultural interests.

If the A-District is truly intended to serve agricultural preservation objectives, then a much larger minimum lot size should be introduced. Some jurisdictions in Virginia employ a "sliding scale" for minimum lot size and development rights. For example, Albemarle County allows for only a maximum number of five development rights of "small lots" with the balance of one's land required to be divided into 21 acre lots. Clarke County requires increasingly large lots and lower net development rights the larger the tract. Both of these systems have been castigated for being non-uniform, and we tend to agree. However, neither system has been challenged to date in court.

For a minimum lot size in King and Queen, we recommend that 20 to 30 acres be considered by the Commission. Obviously, there is broad flexibility in how we treat these regulations, but our overriding objective should be to increase the ability of large landowners to market their land in a piecemeal fashion.

B. The minimum lot width should be increased to 400 to 500 feet if the minimum lot size is increased. There aren't many farms that are narrower. In this regard, clustering should be introduced to enable a subdivider the obtain optimal lot proportions while minimizing the impact of "frontage" development on the existing State road network.

C. Conceptually, the Commission should think of the A-District in terms of minimum *district* size. For example, it is desirable A-Districts should cover

several thousands of acres uninterrupted by other, more intensive use districts. Thus, in considering any new Zoning Map for King and Queen, the broader planning objective should be to maintain and, possibly, broaden the land area coverage of the A-District.

D. Livestock auction markets should be a conditional use due to the potential of such facilities to cause runoff and non-point water quality problems within sensitive environmental areas.

E. Public solid waste transfer sites should be a conditional use for the same reasons as above.

F. For more effective implementation, this district should be abandoned and replaced by a new Agriculture/Open Space zoning district which is more compatible with the recommendations presented for the Agriculture/Open Space Planning District (see preceding chapter).

3. Agricultural/Low Density Rural

A. For more effective implementation, this district should be abandoned and replaced by a new Rural Residential zoning district which is more compatible with the recommendations presented for the Rural Residential Planning District (see preceding chapter).

B. The A/LDR District concept, in essence, recognizes the necessity to "spot" zone certain uses within the less dense Agricultural District. In the application of this district, great care must be taken to maintain "uniformity" with respect to its use. If the ordinance is to be rewritten, this district should be replaced by a more flexible, cluster-oriented approach to rural subdivision.

C. Commercial uses are not recommended in the Rural Residential Planning District. However, if the A/LDR district is retained additional regulations for general stores should include (1) requirements for landscaped screening of parking from public roads and adjacent "ag" land, (b) additional front yard setbacks for parking lots, and (c) additional side yard setbacks when store is adjacent to "ag" land. With these stipulations, the general store might best be placed into the district as a conditional use (requiring a site plan to show the proper placement and application of the additional requirements.)

D. Accessory use yard requirements are minimal. These could easily be increased to twenty five to thirty feet if the Commission so desires.

4. Residential (R) District

A. There is little difference between the R-District and the A/LDR District with respect to area, yards, widths and setbacks. The County needs to establish distinguishing rationale between these two districts in order to effectively apply one or the other to a given piece of property. It is likely that the use of the A/LDR District could easily be challenged by a private landowner desiring this next higher density. Our recommendation would be to either (1) increase the A/LDR minimum lot size, (2) decrease the R-District lot size, (3) or to blend the R- and A/LDR Districts into a single zone.

B. The option to develop "cluster subdivisions" could be included in the A/LDR-District. In areas where soils conditions are suitable, clustering could be encouraged in conjunction with preservation goals for sensitive environmental properties which might not otherwise fall under CBLAB regulations. For example, the minimum lot size could be reduced to 30,000 SF where it can be shown that (1) the overall subdivision density does not exceed one unit per acre, (2) there is ample room on each lot for a "reserve" drainfield, (3) increased setbacks from stream

valleys can be achieved, (4) reduced overlot grading impacts would be achieved, and (5) minimized disturbance of tract (including reduction in impervious area) is readily attainable.

C. Since two-family dwellings are permitted, the minimum lot area should stipulate that adequate area exists for a "reserve" drainfield for each unit. On the other hand, the County should seriously reconsider the viability of any two-family dwellings in the rural countryside. Such uses are normally associated with village and town-scaled development.

D. For more effective implementation, this district should be abandoned and replaced by a new Rural Residential zoning district which is more compatible with the recommendations presented for the Rural Residential Planning District (see preceding chapter).

5. Waterfront Residential (WR) District

A. All yard regulations (front, side and rear) may need to be amended to meet future minimum CBLAB design criteria. In this case Section 6-A-8 would have to be expanded.

B. In many instances, the only difference between "conservation" land and "waterfront residential" land will be the development objective of the landowner. Thus, the areas within the County for the geographical application of this district must be carefully defined, otherwise the Commission will be hard pressed to deny a "WR" application.

C. Given the land use goal of reducing waterfront development, the WR District appears to be its own worst enemy. To maintain compatibility with the Comprehensive Plan, waterfront development should be implemented only where environmental issues can be satisfied. There is little evidence that development employing well and septic field utilities should be permitted along the County's senstive waterfront areas and other wetlands. For this reason, the County might consider a policy of permitting waterfront subdivision only where central water and sewer systems could be economically developed.

6. Residential Village (RV) District

A. Unlike the R-District, this district does not permit two family dwellings. If this district is to survivie, these should be included, but as a conditional use.

B. Nursing homes and group homes should be conditional uses requiring both public (or centralized) water and sewer. There is no provision for density controls for these uses, which creates the potential for abuse of this regulation.

C. This district should only be used where public (or centralized) water and sewer facilities are in place or are planned. The area regulations for non-centralized utilities are not unlike the R-District. This presents redundancy and will cause problems down the road with implementation.

D. The 24,000 square foot minimum lot size is too large to economically develop as a "village" residential use and yet, it is too small to accommodate development on well and spectic systems. One or more single family detached districts of varying lot size could replace this district. Normally, a "village" density corresponds to a half-acre (or 20,000 SF) lot, while a "suburban" density corresponds to a quarter-acre (or 10,000 SF) lot. In no instance, however, should such densities be permitted without public utilities and adequate subdivision improvements.

E. There are no provisions in the residential districts for attached housing, condominium housing, apartment housing and other residences which could be

developed in a "village" or "suburban" orientation with public utilities. We recommend that two new districts covering these uses be incorporated into the zoning ordinance. These may not be used for quite some time to come, but they should be an integral part of the overall ordinance.

F. For more effective implementation, this district should be abandoned and replaced by a new Rural Village zoning district which is more compatible with the recommendations presented for the Rural Village Planning District (see preceding chapter).

7. Manufactured Home Park (MHP) District

A. Given the environmental hazards posed by mobile home parks that contain small lots and use well and septic systems, there should be very compelling reasons to develop parks using public water and sewer systems. The current ordinance does not provide a sufficient "carrot" to encourage public utilities. More density, smaller lots and clustering should be discussed as an option when public utilities are obtained.

B. Conversely, a manufactured home creates similar impacts as a single family residence. Thus, there is little reason to permit the development of mobile homes (served by well and septic) on lots any smaller than a normal residential dwelling. A minimum 40,000 SF per lot should be considered.

Additional Implementation Considerations

1. Cluster Subdivisions
Conventional rural lot development is subject to the criticism that it does not foster environmentally sound environmental practices. As an alternative, the clustering of residential lots is a means of permitting a developer to take best advantage of the prime developable portions of a property while conserving those areas which are environmentally sensitive. The net result is that the County achieves better development and the land owner is able to produce the development more cost-effectively. Unfortunately, King and Queen's ordinances do not afford this option.

Clustered residential development will likely become an issue as growth pressures in King and Queen increase. For example, the County may want to encourage cluster subdivisions as a mechanism to limit the "eating up" of road frontage along the major traveled routes in King and Queen. Similarly, clustering is one means of introducing "equity" into the County's growth controls while adhering to the more restrictive aspects of the Chesapeake Bay regulations. Additional language should be added to both the subdivision ordinance and the zoning ordinance to address this concept. In some instances, cluster development should be required, while in others, cluster development should only be permitted as a conditional use.

2. Pro-Rata Share for Public Utilities
Virginia legislation provides for regional as well as joint development approaches for the construction and financing of public water, sewer and drainage improvements. The County may wish to expand its planning to identify and include geographical "target areas" where the pro-rata share legislation would be effective. Section 15.1-466(j) now allows for public water to be included in pro-rata share programs. The County ordinance recognizes only sewer and drainage as inclusive in this concept.

3. Storm Drainage and Floodplains
The ordinance should provide a more explicit definition of adequate storm drainage as well as floodplain identification techniques. The purpose of this would be to place the responsibility on the applicant's engineer to clearly establish sound subdivision designs which respond to health and safety issues related to drainage. In this regard, the establishment of flood plain easements and storm drainage improvements criteria should be included in the subdivision ordinance. Construction standards and engineering

specifications should be referenced to current published VDOT design guidelines. The current VDOT Highway Drainage Manual should be identified as an adopted resource for preparing designs for drainage improvements within public rights-of-way. Also, the State's Best Management Practices Guidelines should be employed for all land development activities. Engineers should be required to submit hydraulic designs computations on standard VDOT work sheets.

4. Wetlands and Critical Environmental Areas

As noted throughout this document, the Chesapeake Bay Local Assistance Board has recently finalized the Chesapeake Bay Preservation Act regulations. These regulations require that all impacted Tidewater jurisdictions--including King and Queen--amend local ordinances to implement the policies of the Chesapeake Bay Preservation Act. During the first year of the Board's program, certain minimum requirements must be addressed by King and Queen. These include the preparation of environmental data, the local designation of the County's preservation areas, the adoption of interim environmental performance standards and design criteria, and the designation of "intensely developed areas" if any exist.

During the second year of the Bay program, localities will be required to fully implement the balance of the CBLAB criteria. At this time, the King and Queen subdivision and zoning ordinances must be modified to reflect the adopted CBLAB environmental design criteria. Other County land use guidelines will be affected, including the erosion and sediment control ordinance, procedures for requiring environmental impact assessments for new development, floodplain controls, and stormwater management guidelines.

The CBLAB has recently issued a "local implementation manual" which will detail how localities can work with the new State regulations. While certain basic performance guidelines will be mandated, it will be generally left up to the Planning Commission to determine how best to apply this work to King and Queen's growth management regulations.

5. Major and Minor Subdivisions

The subdivision of land can take on varying scales and proportions. The County's subdivision ordinance should be sufficiently flexible to recognize that certain regulatory differences exist between a 200-acre subdivision and a simple division of family land for use by family members. Similarly, the subdivision standards should provide for "minor subdivisions" which need not go through the "bureaucracy" normally associated with larger scaled developments. The intent is to allow the owner of a small parcel--say ten to twenty acres--to either give or sell a small portion of one's land to family members without having to meet all normal subdivision stipulations. On the other hand, "major subdivisions" regulations should maintain and respect all legislatively mandated review requirements.

6. Public Road Frontage Conservation

At present, King and Queen's public road system provides adequate levels of service to the existing population. While many existing State secondary roads have major alignment deficiencies--both vertical and horizontal--due to any given road alignment's particular agrarian origins, there is no compelling reason for these roads to be upgraded as long as development pressures do not overcome the rural countryside. Due to economic realities, VDOT road funding mechanisms and priorities do not place the County in a good position to receive extensive funds for new and improved roads. Thus, it is extremely important for the County to view their existing road system as a reasonably "fixed" resource.

The uncontrolled development of private access points onto State roads is a significant factor in reducing the capacity of the road network. Since most residential land development in King and Queen is created on lots with direct frontage on existing secondary roads, the effective carrying capacity of these roads is being gradually eroded. At the same time, these residential lots absorb valuable frontage real estate while doing little to complement the rural ambience of the road network. Over the long-term, frontage lots severely damage the continuity of rural roads--from both a functional and aesthetic standpoint--and, thereby, create the stark potential for King and Queen's attractive agricultural environment to take on the look and feel of poorly conceived, piecemeal development.

To offset this potential, the County's subdivision and zoning ordinances should be restructured to encourage non-frontage development, while, at the same time, placing restrictions on the strip development of residential lots along vulnerable existing roads. Zoning techniques--such as cluster planning, performance zoning, density bonuses and increased minimum lots widths on public streets--can have the net impact of controlling highway access points and lessening the adverse traffic characteristics of rural land subdivision.

The subdivision ordinance should be strengthened to mandate preliminary sketch plans and work sessions with the Zoning Administrator to explore alternative subdivision layout schemes. New subdivision standards should address a scaled system of permitted road access points from private land. Such a system would take into consideration the unique characteristics of a given property, including (a) the total length of road frontage, (b) the total land area to be developed, and (c) the physiographic characteristics of the land. The net effect would be to effectively link site-specific performance criteria to traditional subdivision standards. The adoption of the Chesapeake Bay regulations will, for the most part, require that the County establish a performance approach to subdivision and site plan review.

Chesapeake Bay Preservation Area Designation and Management Regulations

On September 20, 1989, the Chesabeake Bay Local Assistance Board adopted and issued the final regulations regarding Chesapeake Bay Preservation Area management and designation guidelines. These regulations will have an immediate and immense impact on the traditional systems of land use governance in rural areas such as King and Queen. Further, the new laws require full and timely jurisdictional compliance with respect to incorporating minimal management and preservation area protection practices into local zoning and subdivision controls.

The Chesapeake Bay Local Assistance Board (CBLAB) regulations are incorporated into a six part format developed by the State which address the following chapters: (1) Introduction and purpose, (2) local government programs, (3) preservation area designation criteria, (4) land use and performance criteria, (5) implementation and regulatory consistency, and (6) enforcement.

The timing of CBLAB implementation requirements will be an important concern for the County and one which is certainly integral to this Comprehensive Plan. With respect to the current comprehensive planning process for King and Queen County, it will be necessary to incorporate several aspects of the CBLAB guidelines within a two year period. However, Preservation Area designations and development performance criteria must be incorporated into County ordinances within twelve months from the date of CBLAB enaction, or September 20, 1990.

Summarized below are the essential findings for each of the six CBLAB regulatory mandates. These portions of the new regulations should receive the County's immediate attention.

Part I. Introduction

A. All towns, counties and cities in the Tidewater shall adopt these regulations; while other local governments outside the Tidewater have the option to adopt the same. King and Queen's boundaries are fully located within the impact area.

B. The principal purpose of the regulations are to both protect and improve water quality in the Bay via the definition and protection of designated areas to be known as Chesapeake Bay Preservation Areas.

C. In essence, the new regulations establish a model for localities to draft and adopt growth management regulations for the Preservation Areas. Zoning, subdivision, erosion and sediment control, and comprehensive planning are to serve as the mechanism through which localities enact the State mandated requirements.

D. A comprehensive set of definitions are provided in CBLAB's Part I regulations. These definitions should be amplified and refined to meet the needs of King and Queen County planning process, and, thereupon, should be adopted into the language of the zoning ordinance and the subdivision ordinance (or in a separate CBP Ordinance). A copy of these definitions are appended to the Comprehensive Plan.

Part II. Local Government Programs

A. This chapter examines the goals and objectives for the development of local governmental programs addressing the CBLAB regulations. The County should incorporate by reference the five goals stated in 2.1 into the King and Queen comprehensive planning goals.

B. King and Queen shall be required to adopt two elements of the program within a twelve month period. These include (1) a map delineating Chesapeake Bay Preservation Areas, and (2) land use performance criteria applying to these areas. The dominant thrust of the County's planning activities upon adoption of this Comprehensive Plan should be to initiate all studies and requirements towards meeting the CBLAB timeframes. This work should be coordinated through the Planning District Commission in concert with approved planning grants provided to that agency by the State.

C. The remaining elements of the CBLAB program must achieve local compliance within a second twelve month period. These include (1) a comprehensive plan revision that incorporates the protection of the Preservation Areas and the quality of State waters, (2) a zoning ordinance (or revision thereto) that incorporates measures to comply with CBLAB guidelines,(3) a subdivision ordinance (or revision thereto) that incorporates measures to comply with CBLAB guidelines, (4) an updated erosion and sediment control plan, and (5) a set of administrative policies and permitting procedures that ensure effective management and quality control of development by the locality, specifically a "Plan of Development" process.

Part III, Preservation Area Designation Criteria

A. CBLAB regulations provide for two levels (or designations) of Chesapeake Bay Preservation Areas: (1) Resource Protection Areas and (2) Resource Management Areas.

B. Resource Projection Areas (RPAs) apply to lands at or near the shoreline. These lands are valuable due to (a) their ecological function in removing or reducing adverse impacts of runoff entering the Bay and its tributaries and (b) their extreme environmental sensitivity to the disruptive influences of urban development. RPAs include tidal wetlands, tidal shores, nontidal wetlands contiguous to tributaries and tidal areas and defined buffer areas.

C. The buffer area is defined as a 100' strip of land located adjacent to and landward of the above defined Resource Protection Areas. For example, the RPA for an environmentally sensitive tributary stream would encompass a 100' strip of land on both sides of the stream, resulting in a total width of 200'. Nothwithstanding these minimum setbacks, there is nothing to preclude the County from increasing setbacks to distances more compatible with rural development practices.

D. Resource Management Areas (RMAs) represent the second tier of Chesapeake Bay Preservation Areas. RMAs are defined as those environmentally sensitive land types that have a potential for causing water quality degradation if improperly used or developed.

E. In establishing its local definition of RMAs, King and Queen County must consider the following land categories for inclusion: (1) floodplains, (2) steep slopes, (3) highly permeable soils, (4) nontidal wetlands not included in the primary Resource Protection Area definition and (5) any other lands on which active development would degrade or diminish the functional environmental value and quality of the area.

F. This part of the Bay regulations also defines "intensely developed areas". Basically, Intensely Developed Areas "grandfather" all existing development, but are established to view new development or infill (redevelopment) as being subject to CBLAB regulations. IDAs are assumed to have (1) public water and sewer and (2) a minimum development density of four units per acre. While there is currently no land in King and Queen which would meet this definition, IDAs should be fully understood in conjunction with their potential impact on the comprehensive planning process.

Part IV. Land Use and Development Performance Criteria

A. The major goals of the State act are to (1) prevent a net increase in nonpoint source pollution from new development, (2) achieve a 10% reduction in nonpoint source pollution from redevelopment, and (3) achieve a 40% reduction in nonpoint source pollution from agricultural and silvicultural uses. The County must prepare essential design criteria for adoption by September 20, 1990.

B. It is incumbent upon the County to ensure (1) the adoption and implementation of local regulations to achieve these goals and (2) compliance with local regulations upon their adoption. This Comprehensive Plan establishes the framework for these regulations, and subsequent State funded programs by the Planning District Commission will provide the County with additional support, such as mapping and environmental inventories.

C. King and Queen has certain latitude and range in making judgments in determining the site-specific boundaries of the designated areas based on the minimal level of sophistication of local mapping. At this point in time, the County does not have appropriately scaled and sufficiently detailed topographic, soils, and other physiographic maps to accurately map RPAs and RMAs. However, a developer's site plan prepared at a nominal scale of 1"= 50' to 60' can delineate wetlands boundaries and steep slopes to the degree of accuracy needed to make basic site design decisions. In this regard, the most effective and efficient growth management mechanism is to require the private landowner to establish these boundaries based on a carefully defined set of mapping and site design parameters to be adopted by the County.

D. The recently issued State guidelines provide a "model" set of performance priorities, policies and generalized environmental design criteria which must be finetuned by King and Queen. This model addresses performance standards to (1) minimize erosion and sediment potentials, (2) reduce the application nutrients and toxics on land, (3) maximize rainwater infiltration, and (4) sensitize new development to natural systems. It will be incumbent upon the County to adjust this model to local requirements within the context of the rural geographical setting.

E. King and Queen will have to incorporate certain basic "minimums" into its performance standards, as per section 4.2 of the Regulations. Also, these "minimums" should respect the "environmental land unit" and "net developable acreage" concepts presented in the Planning Process chapter of this document.

F. As an illustration of the baseline, minimum standards to which the County must adhere, the following criteria are included in the Act: (1) All development exceeding 2500 square feet of land disturbance must be subject to a formal development plan process (which can be appended to either the site plan, subdivision plan and/or the erosion and sediment control process), (2) septic systems must be pumped out every five years, with sufficient on-site area reserved for a second (reserve) septic field for any newly recorded subdivision development, (3) post-development nonpoint pollutants projected for any land disturbing activity cannot exceed pre-development pollutant levels (this requires the formulation of Best Management Practices), and (4) all agricultural lands will have to have an approved soil and water quality conservation plan by 1995.

G. The County will be required to establish guidelines for "water quality impact assessments" for any new or proposed development situated within Resource Protection

Areas. Developers will have to prepare these environmental "impact" statements as a condition of development approval. The minimum 100' buffer strips must be delineated in these impact studies. Also, Best Management Practices and landscape preservation areas must be defined relative to their pollutant reduction potentials. Certain provisions can be included in the local regulations to reduce the buffer strip requirements, but there must be a resultant equivalent that provides the same water quality benefits as the 100' buffer. Given the rural nature of King and Queen, on the other hand, the County could consider adopting more stringent buffer criteria (i.e. in excess of 100') to ensure the preservation of water quality.

H. King and Queen may incorporate provisions for waivers and exemptions to the requirements of the Act, provided that (1) there shall be no net increase in nonpoint source pollution from the continuation of any existing land use activity and (2) erosion and sediment controls are adequate and in compliance. It is important to note that the County's erosion and sediment control ordinance in no way replaces the requirements of the Act. With the Bay regulations, the erosion and sediment control ordinance must be fully implemented along with the newly adopted preservation and management criteria. In effect, the County will now have a "two-pronged" mechanism with which to address the inherent problems associated with water quality, water runoff and erosion and sediment control measures.

I. Passive recreation areas (such as County parks), nature trails, and historic areas are considered exempt from the Act.

Part V. Implementation, Assistance and Determination of Consistency

A. In December1989, the State issued a "local assistance manual" to provide additional program guidance to King and Queen and other localities. The manual focuses on techniques and methods for delineating and establishing Chesapeake Bay Preservation Areas. These methods are based, for the most part, on the use of existing and readily available data resources.

B. CBLAB will establish a "liaison" with each local government in the State for the purpose of providing financial and technical assistance in developing local regulations.

C. CBLAB will review and recommend upon all locally designed programs. This will be done within a 60 day period.

D. King and Queen will be required to hold public hearings on the "first year" program requirements and to provide copies of these requirements to the CBLAB.

E. The "second year" requirements must also meet CBLAB reviews and approvals. Local public hearings on these must be held. Part 5.6 provides the generalized requirements of what must be incorporated into the Comprehensive Plan, subdivision ordinance and zoning ordinance update.

Part VI. Enforcement

A. CBLAB has adopted regulations which will enable them to monitor each locality's compliance with the Act. Appeals and enforcement procedures have been incorporated into these regulations.

Chesapeake Bay Act Implementation Summary

The "first year" CBLAB program (performance standards and mapping of designated areas) are the most pressing task for King and Queen. The performance standards should be integral to the preseration area designations. The mapping process could be very time consuming, but, hopefully, the results will yield the type of information which will enable the County to make better land use decisions for the future land use plan.

Chapter 8
PRESERVATION AREA CRITERIA AND DISTRICTS

Reserved for Future Use

APPENDIX